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THE

TRUTH ABOUT MONEY.

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A PRACTICAL AND IMPARTIAL INVESTIGATION OF THE MONEY QUESTION.

BY

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INTRODUCTION.

Never before in the history of our country has a Presidential campaign been based so entirely upon an economic question of such momentous importance and fraught with such consequences. Strong party lines have been broken down by the issue, and to-day the people of our nation no longer look for facts on this question from their party leaders, but are beginning to study and investigate this financial problem for themselves. For their study they demand, from the student of the question, "The Truth About Money;" not the theories nor a scientific economic treatise of the problem; but the plain, simple truth, based upon practical and impartial facts as obtained from the pages of history.

The press of business duties makes it impossible for the wayfaring man to spend the time required to gain these facts from the original sources. Therefore there has been a demand for a small volume, authority on the subject, and containing the vital and important facts necessary for an intelligent knowledge of the present issue.

On reviewing "The Truth About Money," I feel that it is the best answer to this call yet published. It is pointed, interesting, and contains the essential and important facts pertaining to the money question. It has been carefully written and published by four students of the University of Wisconsin, who have made a thorough and impartial investigation of the subject during their preparation for inter-collegiate and annual joint debates at the University.

From my connection with the University of Wisconsin, as a member of the Board of Regents for a number of years, and from my knowledge of the work and ability of the authors, I feel confident that this book has been carefully compiled and will supply the demand for practical and impartial facts on the financial question.

I most heartily endorse the volume and take great pleasure in recommending it to the student who is desirous of gaining a knowledge of the money question in the shortest possible time.

JULY 27, 1896.

TO

OUR ALMA MATER,

THE UNIVERSITY OF WISCONSIN,

THIS VOLUME IS RESPECTFULLY

DEDICATED

BY

THE AUTHORS.

PREFACE.

Since the two great national conventions have determined that the money fight is to come, the question supreme in the mind of every patriotic citizen within the confines of the Union, is: "What is the truth about money?" The coming campaign will be the most bitterly fought struggle in the history of presidential elections. It is to be a CAMPAIGN OF EDUCATION, and by it will be settled a problem of interest to all peoples and nations.

For the past year the country has been flooded with a deluge of "literary rot" on both sides of the question, written in so-called popular style and decorated with the most dramatic pictures and rhetorical flourishes, calculated simply to cater to the sentiments and not to the common sense of the reader. A year ago these publications were interesting and amusing, but that time has passed, and to-day the money question is upon us in full force and must be solved by honest judgment and the best minds this country possesses.

The nation has not been confronted by a question of such gravity, since the days of reconstruction, when the problem of slavery was settled. The welfare of this country for a decade to come will depend upon the people's answer to the money question next November. The warning voice of experience speaks out clarion-toned, that if the people falter in their duty, or answer the question wrongly, there will ensue the most distressing and disastrous panic and crisis that it has ever been the lot of our nation to experience. With such a momentous issue at stake, entailing such appalling consequences as must follow

from a false step, it would be a felony, than which there is no worse in the decalogue of crime, to knowingly create a false impression or to willfully misrepresent the facts in the question now in controversy.

Recognizing these facts, the four writers of this book have sought, from an impartial standpoint, to gather the ABSOLUTE TRUTHS concerning the question. This volume is the product of over two years' study in practical economics and the money question at the University of Wisconsin, and also the result of the preparation for the annual joint and inter-collegiate debates on this question at the University. The facts presented are entirely the result of original research, and can be substantiated.

We have been kindly assisted by Mr. Halford Erickson, the State Statistician of Wisconsin, and have had at our disposal all the earliest and latest literature and government reports extant upon the question, for which we are indebted to Mr. Bradley and Miss Baker, Librarians of the Wisconsin State Historical Library at Madison.

Our purpose is solely to present the actual unbiased facts upon the question, irrespective of party or prejudice. These facts we submit to the fair-minded reader, who seeks a comprehensive treatment of the question in the most concise form. At the end of each chapter we have endeavored to draw conclusions from the preceding facts so as to leave the subject of each chapter clear and complete in the reader's mind.

As we love our Alma Mater, the University of Wisconsin, to whom we have dedicated this volume, and as we value our reputations as students, we have sought only "THE TRUTH ABOUT MONEY."

THE AUTHORS.

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THE TRUTH ABOUT MONEY.

CHAPTER I.

ORIGIN, GROWTH, KINDS, AND FUNCTIONS OF MONEY.

The world's money of to-day is the result of ages of evolution. With the advance of civilization and commerce the needs for money have so multiplied, and the uses of money have become so complex, that a thorough understanding of the financial situation requires a vast amount of study and erudition.

Money and exchange go hand in hand, and with the growing complexity of trade we have a growing complexity in the use of money. In the ancient world

BARTER, OR TRADING

was the method of carrying on exchanges, and no medium of exchange was used. Man supplied his wants by directly trading some one article which he had in his possession for another article which he desired. If he wished to obtain some article of food, and had an ox to trade for it, he would seek out a man who had the food and desired the ox, and a trade would thus be made. In this manner desired articles and the necessaries of life were obtained. This system of exchange did very well while the wants of men were few and the community was small, but as man's wants gradually increased and the community grew larger exchanges became more

complex. Soon greater importance was attached to exchange and the inconvenience of a cumbersome system of direct barter became very apparent. The man who owned the ox soon found difficulty in finding the person who wanted the ox and would give the desired food in trade. It was soon observed that this inconvenience could be overcome by the adoption of a common

MEDIUM OF EXCHANGE.

By selecting some one commodity as this medium, which was well known in the community, and which possessed value and was desired by all people, this inconvenience was overcome. This commodity would answer for a medium in which and by which all other articles or commodities could be exchanged. In this way we have the rise and use of money from barter. Thus we see that money "is anything which will be received in the payment of all debts, both public and private, and will pass freely from hand to hand in exchange for all other commodities."

From time to time, many different articles have been used by different communities as this medium of exchange. No definite qualities seem to have been considered in selecting this article. But custom has in all cases selected an article which was commonly desired in the community and which possessed some value in itself. This article had also to be of such a nature, as to be easily carried from place to place: thus the Aryans and Israelites used cattle as their medium of exchange, because cattle were their most common article and possessed value which could be easily driven from place to place. The American Indians used strings of beads for the same

reason. At one time in New England a man's wealth was measured in lead bullets. We are all familiar with the use of tobacco as the money of Virginia. Copper, iron, furs, and salt have at different times and in different places been used as money or the medium of exchange.

Some of these articles are more convenient as a medium of exchange than others, as some of them possessed: 1, great homogeneity in substance, that is, similar weights are nearly equal in value; 2, some are more minutely divisible; 3, some contain greater value in small bulk and are thus convenient and handy; 4, some are not as durable as others, being too easily subject to decay. Commodities having these qualities could easily do the work of a medium of exchange. But with the increasing number of articles to be exchanged, the growing complexity of business, and the rapid spreading of population, there came a need for some article that could be used as a

COMMON MEASURE OF VALUE.

It was learned that after a man was found who had the desired food and would trade it for an ox, that there was no way of determining how much food should be given for the ox. Therefore a measure of value must be found. This measure of value must possess value in itself; for as length must be measured by length, so value must be measured by value.

The measure of value must be such that it can be used between different communities, as well as between different articles. It must be a standard of comparison. Therefore it must possess all the qualities of a medium of exchange

and must be a commodity universally known to possess worth or value. As a matter of convenience the trading world demands that the commodity to be used as money shall be able to fulfill two functions: that of a medium of exchange, and a measure, or standard, of value. Many commodities can be found which might most perfectly fulfill these two functions. And were this all that money must do there would be no monetary science or money problem.

But trade and commerce cannot advance far before people begin to borrow and lend wealth, and debts of various origin are made for various amounts and lengths of time. Many times the same article, or an article similar to the one borrowed, as, for example, corn borrowed to-day may be returned by corn in ten years from to-day; a plow or spade may be borrowed to-day and the same plow or spade may be returned at some future time. But in many cases it may happen that the lender does not want the corn or plow returned at some future time. And again, the borrower may not be able to return the corn or plow at that time. But men will borrow and lend wealth, therefore we must have a

STANDARD FOR DEFERRED PAYMENTS.

We must have some standard commodity, in which and by which all articles of wealth borrowed for any length of time may be paid, at no loss to either the borrower or the lender. Here we have another important quality which the money of to-day must possess to completely fulfill its functions. Stability of value is one of the most essential qualities that money should

possess. The article which is to be used for a standard for deferred payments must be one having a stationary and invariable value. It must be as little affected by the variations of supply and demand as possible. Its value must neither rise nor fall, but a unit of it must be worth the same to-day as to-morrow.

For convenience the commodity used as a medium of exchange and measure of value should also be able to fulfill the third function required of money in the trading world. It should be a standard for deferred payments or a standard of value for lengths of time.

It is the endeavor to find a commodity containing this stability of value and the qualities requisite to fulfill this third function, together with the other two functions, that has given rise to a monetary question. Gold and silver have been selected from the list of all commodities, as a standard money, because they possess in the highest degree the qualities necessary to fulfill the functions of money. Their superiority over all commodities yet used as money is unquestioned. The dispute arises when we ask, and endeavor to determine, which performs the work the better—gold or silver? Would both together be preferable to one as a standard money? Or do we need either?

In addition to money that has value in itself, as coin or metallic money, we have what is universally known as

PAPER MONEY.

We have a particular quality of paper, not easily counterfeited, and cut in a convenient form for use, and stamped by some organization

of authority, as a bank or the government. Paper money is divided into several classes and dependent upon the manner in which it is issued. It gains value as money, and authority to circulate, from the laws under which it receives its origin. The manner in which it is issued and secured will be given in a subsequent chapter.

Ely, in his "Outlines of Economics," page 144, says: "Paper money has been extensively used. Paper money consists of promises to pay on demand which people are willing to receive in place of metallic money. They are usually promises either of banks or of governments. People take them because they believe the promise will be kept, or because they think that others will accept them, or because they have been made a legal tender and people must accept them for debt, or because, as usually happens, they are receivable for taxes. Where this confidence in paper money is complete (and it is at par with coin) it is preferred to precious metals, because more convenient. If anyone will read all that is engraved on the paper money circulating in the United States he will perceive its nature and he will discover that it is of two general kinds: notes of national banks, and notes or certificates of the federal government. It saves the use of the precious metals, and capital otherwise employed as a medium of exchange, can be used for other productive purposes."

Paper money, as above described, is often called representative money. White, in his work, "Money and Banking," says: "Representative money is anything promising to pay money which circulates as a common medium of exchange. It is usually made of paper, but sometimes of a

cheaper metal. * * * Representative money may be put in circulation by governments, by corporate companies, or by individuals. It may be redeemable or irredeemable. It may promise to pay money on demand or at a future time—in the latter case it may or may not draw interest. It may or may not be a legal tender between individuals. When it is issued by the government and is legal tender it is called fiat money." This is a collaquial phrase. In the United States the word "greenbacks" is applied to all government issues of paper money, issued during the civil war. Paper money issued since that time is known as gold and silver certificates.

Paper money and standard coins are generally of quite large denominations, each representing a large value. In order that small local trading and exchanging may be carried on with facility we have the world over what is knows as

SUBSIDIARY COINS.

Any coins which are not intrinsically worth the value they represent come under this head. To-day they are used principally for retail trade. But when first issued and coined by the government they were made of the same intrinsic value as standard coins, but it was soon found that they were used in foreign trade and left the country without any small coin for retail exchanges. So the government reduced their value, made them subsidiary coins in order to keep them in the country. In the United States the subsidiary coins are pennies, nickels, dimes, quarters and half-dollars, and circulate only in the United States.

Thus far we have seen that money is a product

of evolution, and that different peoples at different times have used different articles as money. We have noticed the change of money with the change of civilization. Says Sherwood: "A people's history is stamped on their coins. Thus the money of the nation is closely related to its condition of prosperity and civilization."

In tracing the use of money up to the present time we have found that it has three functions to perform: FIRST—A medium of exchange. It must circulate freely from hand to hand. SECOND—A measure, or standard of value. It must be the commodity in which the value of all other commodities is measured. It must be the standard of comparison for all exchanges. THIRD—A standard for deferred payments. It must possess great stability of value. A unit to-day must be of the same value as a unit at any future time.

The qualities which money must possess to fulfill these functions are: divisibility, homogeneity, portability, cognizability, great value in small bulk, and above all, and the most essential, great stability of intrinsic value. The work which money must do, and the qualities it must possess to do this work, being known, it devolves upon us to see how gold and silver, either together or separately, have performed these functions in the past. From these facts conclusions can be drawn as to whether one or the other of the metals, both metals together, or if either of the metals should be made our standard for the future. If one or the other of the metals should be used, which possesses the greater stability? is the question to be determined. If both are to be used, can a parity between the metals be maintained, that is, can they both be coined in unlim-

ited quantities and be maintained interchangeably as money? Is there any fixed ratio between them? And can this ratio be maintained? If it cannot, then one metal will dominate and drive the other out of circulation. The great economic question of our epoch, involving inestimable interests is, which metal shall this be, gold or silver? That either gold or silver is perfectly adapted to perform the first two functions of money is unquestioned. The vital and crucial point is, which metal serves best as a STANDARD FOR DEFERRED PAYMENTS.

CHAPTER II.

FUNDAMENTAL AXIOMS OF MONETARY SCIENCE.

In political economy, as in all other sciences, there are certain invariable and universally accepted truths. As the laws of gravity are to the physical sciences, so are the following laws to political economy and the science of money.

1. SUPPLY AND DEMAND.

Supply and demand regulate prices; that is, if there are ten horses for sale and only five men desiring to purchase one horse each, the price will be low, because the supply exceeds the demand; but if, on the other hand, there are only five horses for sale and ten men desiring to purchase one horse each, the price of horses will be high, because the demand in this case exceeds the supply.

Says Lord Lauderdale, in treating of value: "A commodity will increase in value:

1. From a diminution in quantity.
2. From an increase of demand.

It would diminish in value:

1. From an increase in quantity.
2. From a diminution of demand."

Now, says MacLeod, in "Elements of Economics," vol. 1, page 285: "If it be true of any commodity and for any time, it must be true of all commodities and for all times. The fact is that the law of supply and demand, as stated above, is admitted by all economists to be true

when the price of things is very low; it is also admitted to be true when prices are very high; it is therefore admitted to be true at the extremes of prices; and therefore it is manifest by the law of continuity that it must also be true at all intermediate points within the range of prices; that is, it must be universally true in all cases."

"The universal law in economics is, therefore, that the relation between demand and supply is the sole regulator of value. This law, like the law of gravity, holds good in all cases whatever. It not only governs the value of any article, but also governs the value of every separate item of which that article is composed. All circumstances whatever that influence value can be shown to do so solely through their effect in altering the relation of supply and demand."

MONEY.

2. GRESHAM'S LAW OF CIRCULATION:

MacLeod, "Elements of Economics," page 297: "When two different sorts of coins of like value by law, but are intrinsically of different value, are in circulation together, the coin worth the most will go out of circulation. It will be hoarded, exported, or used in the arts; while the coin worth the least or the cheaper coin will remain in circulation. That is: People will always pay their debts in the cheapest money possible. The above law is often stated as follows: 'Bad money drives good money out of circulation.' This fundamental principle in the theory of coinage was named after Sir Thomas Gresham who first explained to Queen Elizabeth the reasons for the disappearance of the good coins

from circulation in England. The reason for this is plain. If full-weighted and depreciated coins are allowed to circulate together, one of the two effects must follow: Either those persons who have commodities to sell will make a difference in their nominal price, according as they are paid in good or light coins, that is, the light coin will be at a discount as compared with the good coin; or, if there is a law to prevent this, and to make both pass at the same nominal value, every one will endeavor to discharge these debts at the least possible expense. He will always try to pay his debts in the lighter coin. The consequence of this is plain: If the law of this country should declare that 4 oz. of silver shall be of the same value as three oz. of silver, the possessors of the light coins will always pay them away in preference to the heavy ones; the bullion dealers will collect all full-weighted coins that they can, and export them to foreign countries, where the coin passes at its full value."

Jevons' "Money and Mechanisms of Exchange," page 84: "This principle applies to the relation of all kinds of money in the same circulation. Gold compared with silver, or silver with copper, or paper with gold, are subject to the same law, that the relatively cheaper medium of exchange will be retained in circulation and the relatively dearer will disappear."

For an illustration of this principle see Chapter on History and Effects of Monetary Legislation and Coinage Laws.

3. Law of Volume of Money.

Every increase in quantity of money in circulation, everything else being the same, decreases

its value or purchasing power, and every decrease in quantity of money in circulation, everything else being the same, increases its value or purchasing power.

In order to fully understand the above principle it is necessary to understand the relation between money and commodities, and the effect of the law of supply and demand upon money. It should be remembered that money is a commodity and is subject to the same laws as other commodities.

"As the whole of the goods in the market compose the demand for money, so the whole of the money constitutes a demand for the whole of the goods. The money and the goods are seeking each other for the purpose of being exchanged." Now, then, let us suppose the money in the hands of all individuals to be suddenly doubled, the wants and inclinations of the community remaining exactly the same, there would be an increased money demand for goods, or, in other words, the price of commodities would have risen, and the purchasing power of money would have fallen. We will suppose a certain article to be for sale at a certain price. There is an amount of money otherwise unemployed, just sufficient to purchase that article. Now place on the same market an exactly similar article, the same amount of money must be used to purchase just twice as much as before, that is, the price will be reduced just one-half.

CHANGE IN THE VOLUME OF MONEY.

The only difference resulting from a universal increase in the volume of money, then, would be to reckon the price (dollars and cents) in higher

numbers. But it must be remembered that in a highly complex system of exchange, a sudden change in the quantity of money would have disastrous effects; especially would this be true in the payment of debts if the amount of money should be changed so that the ratio of quantity of money and amount of goods is different than it was at the time the debt was contracted.

If the amount of money is increased too much, the price of commodities rises and the one to pay the debt will have to sell less of them at the time he pays the debt than at the time it was contracted. This would work an injustice to the creditor. If the reverse should happen, an injustice to the debtor would result. It follows, then, that the amount of money should bear a certain non-fluctuating ratio to the demand for it, that is, the amount of the goods on the market. What this ratio ought to be is one of the most difficult problems of modern finance. A safe rule, but one difficult of application, is, that there should be just a sufficient amount of money to facilitate exchange and the needs of commerce, and no more.

4. VALUE OF MONEY.

Laughlin's-Mill, page 294: "The value of money is what money will exchange for. If prices are low, money will buy much of other things, and is of high value; if prices are high, it will buy little of other things, and is of low value."

Laughlin-Mills, page 203: "The value of money, like the value of all other commodities, is, in the first place, determined by the law of

supply and demand, and ultimately depends upon the cost of production.

"Value of money conforms permanently, and in a state of freedom almost immediately, to the value of the metal from which it is made, with the addition, or not, of the expenses of coinage, according as the expenses are borne by the individual or the state."

5. Supply of Money.

Laughlin's-Mill, page 235: "The supply of money is all the money in circulation at any given time, and does not include that hoarded as a reserve for future contingencies."

Under this axiom it will be noted that money, not in circulation, is in reality not money at all, but merely a store of wealth, performing no money functions.

6. Demand for Money.

The demand for money is regulated: (1) by the rapidity of exchange; (2) by the amount of goods offered for sale, and (3) is limited only by the means of the purchaser.

(1) Laughlin's-Mill, page 297: "It might be supposed that there is always in circulation in a country a quantity of money equal in value to the whole of the goods then and there on sale. But this would be a complete misapprehension. The money laid out is equal in value to the goods it purchases; but the quantity of money laid out is not the same thing with the quantity in circulation. As the money passes from hand to hand the same piece of money is laid out many times before all things on sale at one time are purchased and finally removed from the market,

and each pound or dollar must be counted for as many pounds or dollars, as the number of times it changes hands to effect this purpose."

Jevons' "Money and Mechanisms of Exchange," pages 336-339: "There is no doubt that the rapidity of circulation varies very much between one country and another. A thrifty people with slight banking facilities, like the French, Swiss, Belgians and Dutch, hoard coin much more than an improvident people, like the English, or even a careful people with a perfect banking system, like the Scotch. Many circumstances, too, affect the rapidity of circulation. Railways and rapid steamboats enable coin and bullion to be more swiftly remitted than of old; telegraphs prevent its needless removal, and the acceleration of the mails has a like effect. * * * So different are the commercial habits of different peoples that there evidently exists no proportion between the amount of currency in a country and the aggregate of the exchanges which can be effected by it."

(2) Demand for money regulated by the amount of goods offered for sale.

Laughlin's-Mill, page 295: "The demand for money, again, consists of all the goods offered for sale. Every seller of goods is a buyer of money, and the goods he brings with him constitutes his demand."

(3) From the above the last element in regulating the demand for money is easily deduced, i. e., that the demand for money is limited only by the means of the purchaser. The means of the purchaser in this sense is simply the amount of goods for sale in the hands of any seller. This

amount of goods determines the amount of money to be paid to the owner.

7. An increase in the efficiency of money as a circulating medium is equivalent to an increase in the volume of money.

MISCELLANEOUS AXIOMS.

8. Anything which circulates as standard money and performs the functions of money is subject to the laws which govern money.

9. Money subserves the purposes of a circulating medium only as it possesses the confidence of the people.

10. Credit is dependent upon the confidence of the people and fluctuates independently of the volume of metallic money.

11. Credit is a barometer of trade. As credit increases, trade increases.

12. Inventions and labor-saving devices, when applied to production, lower the cost thereof, and therefore tend to lower prices.

Under this head would fall all those inventions that diminish labor without increasing productive capacity of the soil.

John Stuart Mill: "These improvements do not add to the productiveness of the land, but they are calculated * * * to counteract the tendency in the cost of production of agricultural produce, to rise with the progress of population and demand."

MacLeod, "Elements of Economics," vol. II, page 22: "No change in the cost of production will make any change in value, unless it is also accompanied by a change in the relation of demand and supply, and it is only through and by means of causing such an alteration that a change

in the cost of production is usually accompanied by a change in value. * * * In order to illustrate this, let us take a few examples. Let us take any aricle, such as stockings, and let us suppose that at any given time they bear a certain price in the market, no matter what, and that there is a certain demand for them at that price. Let us suppose that at a certain time before the introduction of machinery, a manufacturer employed a thousand hands. Let us also suppose that he at some time invents a piece of machinery by which he can produce the same quantity of stockings, but at the same expense as fifty men would be. Now, if he only produces the same quantity as before, as he will of course take the best price he can get for them, the demand remaining the same, it is quite evident that no alteration in price will ensue, and all the profits accruing from this diminution in the cost of production will go into the pocket of the producer; consequently, if he does not manufacture any additional quantity, no alteration in the market price will follow; everything will go on as before; the only difference will be that this particular manufacturer will make enormous profits, owing to his sagacity and skill in inventing this machinery. But if the material for making the stockings can be supplied in unlimited quantities, the manufacturer will wish to increase the quantity he produces, and realize greater profits; but if he produce a greater quantity than before, that increased quantity will not be sold unless offered at a diminished price, so as to increase the circle of buyers; but as the cost of production has been diminished to him, he can afford to sell at a di-

minished price; and the more he wishes to sell, the more must the price be reduced."

13. Competition of capital tends to lower prices.

Roger's-Smith, "Wealth of Nations," vol. I, page 356: This principle was first maintained by Adam Smith, and he illustrated it by showing that, as capital increases, competition arises between the owners of different capitals, "the owner of one endeavoring to get possession of that employment which is occupied by another. But upon most occasions he can hope to jostle the other out of employment by no other means than by dealing upon more reasonable terms. He must not only SELL what he deals in somewhat CHEAPER, but in order to get it to sell he must sometimes, too, buy it dearer."

That this principle is universally recognized is fully proved by the great trade combinations of modern times, known as trusts, monopolies, pools, and various other organizations. Their object has been to prevent what is termed "ruinous competition" and to maintain prices of the products manufactured, or, as in the case of railway pools, to maintain rates. But in spite of all the efforts to prevent competition, the principle as above stated remains a fundamental economic axiom.

14. If the prices of commodities fall, thus lowering the income of the producer, he will lower his expense of production in an equal degree in order to maintain his profits undisturbed. A fall in prices means a rise in the purchasing power of money; therefore the income of the producer of gold and silver has increased, yet his expense has been diminished.

15. The price of all commodities cannot rise or fall simultaneously. Things which are exchanged for one another can no more all fall or all rise than a dozen runners can outstrip all the rest, or a hundred trees all overtop one another.

16. By lowering the price of a commodity we increase the demand for that commodity, and vice versa.

17. A change in the rate of wages produces a like change in the cost of production.

18. A contraction in the market of a commodity must be followed by a contraction in the production of the commodity, or the price will fall.

CHAPTER III.

EFFECT OF INVENTIONS, MACHINERY, SKILLED LABOR, RESTRICTED MARKET AND IMPROVED FACILITIES OF EXCHANGE IN LOWERING PRICES.

Prices have fallen in the last twenty years. In this clause lies the germ of the whole controversy, at present agitating our people. The price of an article means simply the relation of the value of that commodity to the value of the standard dollar. If from any cause the intrinsic value of the standard dollar appreciates, then the value of the commodities must depreciate. Any depreciation in the intrinsic value of the standard dollar will cause an increase in the price of commodities. So we see that whatever changes the intrinsic value of the dollar, causes an opposite effect in the prices of commodities. The price of the commodity, however, may be effected also by a change in the intrinsic value of the commodities affected by supply and demand, by cost of production, etc. So we see that prices may be affected by either one of two things; first, by change in the intrinsic value of the standard of the dollar; or, second, by a change in the intrinsic value of commodities. This is as evident as that the relation between the length of the line ab and cd, a_____b and c_____d, may be changed as effectually by shortening the line ab as by lengthening the line cd, or vice versa.

The bimetallist asserts positively that the fall in prices is due to the appreciation in the value of the gold dollar. The gold advocate is quite as unqualified in averring that the fall in prices is due to causes extraneous and foreign to the money issue, that is: FIRST—To improved methods of production. SECOND—To cheaper transportation rates, and THIRD—To improved facilities of exchange. Such statements come, however, from the mouths of men who are ignorant, or who seek to conceal the absolute truth. The fairminded student must recognize that either extreme is false, and that the solution must come from the individual judgment, from cause and effect, which cannot be determined with mathematical precision.

Many component influences have conspired to cause the fall of prices which has indisputably occurred. If prices have fallen, due to the cause of an appreciation in the intrinsic value of the gold dollar, due to the general limitation and demonetization of silver, then certainly, if a practicable and reasonable remedy can be suggested, it should be accepted in justice to the debtor class, always, however, consulting the interests and welfare of the greatest number.

On the other hand, if it can be established that the decreased price of commodities is due to the improved methods of production, to inventions in machinery, to cheapened transportation rates, or to greater facilities in exchange, then the argument of the silver advocate must be condemned as unsound.

We shall now state such facts as are pertinent and available to a solution of these problems.

CHEAP TRANSPORTATION RATES.

How have transportation rates cheapened the price of commodities? Let us compare the rates for a series of years on representative routes. This table represents the average rate between New York and Chicago from 1862 to 1892, and is compiled (as are all the following tables) from the only comprehensive investigation of rates ever made—the Aldrich Senate report on wholesale prices and wages:

TABLE 1.

RATE PER 100 LBS. NEW YORK TO CHICAGO.

1862	1.59	1878	.78
1863	1.69	1879	.75
1864	1.93	1880	.75
1865	2.15	1881	.75
1866	1.93	1882	.55
1867	1.90	1883	.56
1868	1.70	1884	.75
1869	1.32	1885	.75
1870	1.30	1886	.56
1871	.90	1887	.75
1872	1.18	1888	.73
1873	.78	1889	.75
1874	.96	1890	.75
1875	.61	1891	.75
1876	.43	1892	.75
1877	.75	1893	.75

This table shows that there has been a fall of 84c per hundred pounds during the period of thirty years—a fall of 52.8%.

The table in Vol. 1, page 536, of this report shows the change in rates between Chicago and Kansas City on lighter commodities.

TABLE 2.

RATE PER 100 LBS. CHICAGO TO KANSAS CITY.

1864	1.54	1884	.90
1869	1.70	1889	.75
1874	.90	1894	.75
1879	.90		

showing a fall in rates of 84c per hundred pounds—or a fall of 54.5%.

To the West the change in grain rate from Chicago to New York, as shown in the following table, is of vital interest.

TABLE 3.

GRAIN RATE CHICAGO TO NEW YORK PER 100 LBS.

1864	1.00	1884	.30
1869	.70	1889	.25
1874	.55	1894	.20
1879	.30		

From this we see that since 1864 the all-rail rates on grain from Chicago to New York have decreased 80c per one hundred pounds, or 80%, which means a difference in the price of grain of 48c per bushel.

This table may be supplemented from the table on page 610, Vol. I, showing the decrease in grain rates from New York to Liverpool.

TABLE 4.

DECLINE IN RATES ON WHEAT AND OTHER COMMODITIES.

	Wheat, per bushel.		Provisions per ton.
1866	.10½	1875	8.40
1871	.17½	1879	5.50
1875	.16	1884	4.20
1879	.15	1889	3.75
1884	.10	1894	3.30
1889	.06⅞		
1894	.04		

The ocean rate on grain has then decreased 6½c per bushel, which, added to the decrease overland by rail, means a reduction of 54½c per bushel in the last thirty years, from Chicago to Liverpool, where the ultimate price of grain, as is universally conceded, is fixed.

The rates by water have diminished in the last three decades even more than by rail. Notice the change in river transportation rates from St. Louis to New Orleans.

TABLE 5.

MISSISSIPPI RIVER BOATS, ST. LOUIS TO NEW ORLEANS.
(Compiled from St. Louis Merchants' Exchange.)

	Flour per bbl.		Flour per bbl.
1866	1.50	1884	.45
1871	1.25	1889	.40
1874	1.00	1894	.35
1879	.60		

Here we see the marvelous decrease of $1.15 per barrel, or a decrease of 76⅔% in rates. So also the ocean rate on cotton from New Orleans to New York per one hundred pounds.

TABLE 6.

STEAMSHIP RATES ON COTTON PER 100 LBS.
(Page 584, Vol. 1, Senate Report, "Wages, Prices and Trasportation Rates.")

1875	.62½
1880	.50
1885	.35
1890	.33
1894	.30

a fall of 32½ cents per hundred pounds—or a fall of 52%.

The trans-continental rates from 1870 to 1892 show forcibly the remarkable changes which have occurred in transportation rates during the last two decades.

TABLE 7.

FREIGHT RATES, ALL RAIL, SAN FRANCISCO TO NEW YORK, PER 100 LBS.
(Page 608, Vol. 1, of Aldrich Report.)

	Fruit.	Canned Goods.	Vegetables.	Wine.
1870	4.20	4.20	3.20	5.50
1892	1.40	1.00	1.45	1.00

These various tables have been selected simply as representative of the rate changes throughout the country, and may be amplified by a table showing the changes in rates on the great railroads of the country.

TABLE 8.

AVERAGE RATE PER TON—MILE.

(Page 615-617, Vol. 1, Aldrich Report.)

(In cents.)	1852.	1865.	1892.
New York Central	3.02	2.7	.7
Lake Shore & Mich. Southern	3.51	2.9	.602
Mich. Central	.....	3.06	.687
Chi., Mil. & St. Paul	.....	4.11	1.026
Chesapeake & Ohio	.....	6.61	.525
Chicago & N. W.	.....	3.13	1.013
Ill. Central	.....	3.10	.908
Atchison, Top. & Santa Fe	.....	3.10 (1875)	1.130

TABLE 9.

THE AVERAGE FREIGHT RATE PER TON COAL FROM WYOMING VALLEY, PA., TO BUFFALO, N. Y.

(Page 530, Vol. 1, Aldrich Report.)

	Coal cars.
1875—Aug. 1	$4.09
Sept. 1	4.12
1876—May 1	3.80
June 1	3.72
Sept. 1	2.83
Oct. 1	2.97
Oct. 27	3.22
1877—Jan. 1	3.26
May 1	2.61
May 21	2.43
June 1	2.38
Aug. 6	2.61
Aug. 20	3.41
Oct. 15	2.97
Oct. 22	2.74
1878—Feb. 1	2.90
May 1	2.53
July 1	2.69
Sept. 2	2.85
1879—Apr. 1	2.00
Oct. 20	2.16
May 1	2.34
Dec. 1	2.53
1880—Apr. 1	2.77
May 3	2.77
June 1	2.87
Aug. 2	2.96
Dec. 1	3.12
1881—Jan. 1	3.26
1881—Apr. 25	$2.93
July 1	3.01
Oct. 1	3.15
1882—Apr. 17	2.84
June 1	2.78
July 10	2.92
Sept. 4	3.00
Nov. 1	3.11
1883—Apr. 23	2.74
July 2	2.87
Sept. 1	2.93
1884—May 1	2.62
Aug. 1	2.71
1885—May 1	2.35
Nov. 2	2.50
1886—May 1	2.20
Aug. 2	2.30
Nov. 15	2.30
1887—Apr. 4	2.25
Apr. 21	2.00
Nov. 7	2.25
1888—Apr. 16	2.00
May 1	2.00
Sept. 1	2.25
1889—Apr. 15	2.00
1892—May 2	2.25
Sept. 12	2.50
Sept. 19	2.50

This shows the decrease in coal rates over a comparatively short distance to be $1.59 per ton, and should accordingly lower the price of coal to that extent.

Thus these steel bands, which link together and bring into close proximity the most distant cities of the nation, have been a vital element in bringing about the phenomena of falling prices. The effect of cheaper transportation facilities has been especially marked in articles of great bulk and comparatively small value, including the metal products and cereals—wheat, corn, etc.

INVENTIONS IN MACHINERY.

But the most important element which has brought about a fall in prices is the invention in labor-saving machinery and improved methods of production. With the application of steam and electricity in machinery the dwarf has been transformed into a Hercules, and now performs astounding quantities of labor. We have harnessed the mighty power of the elements and the labor force. The power of steam propels the wheel that grinds our grain and that saws our lumber; it drives the mighty greyhounds from continent to continent and circulates through the veins of iron horses, carrying the comforts of life to every corner of the nation.

Unceasingly and untiring electricity labors and the mysterious fluid flows through a maze of wires, sending its vital energy to save the tired limbs of labor. It urges the mighty motor, and displaces cumbersome labor with its skillful power. The needle falls from the tired fingers of the weaver, and falls into iron fingers

which ply it faster and more skillfully. Intellect has conquered, and man's brain supplants the dumb exercise of brute energy. So that it is said the population of the United States and England, with the aid of machinery, can produce more than the entire world without it. The list of American inventions exceeds those of any other country—perhaps of all the countries of the world. More than one-half million of inventions stand as monuments in the patent office to the inventive genius of our people.

PRICES OF GRAIN.

Especially has the production of the cereal products been cheapened. The binder appeared, and enabled one man to do the work of five, for with its assistance one man could bind fifteen acres, while hitherto he bound only three acres. To-day the combined thresher and reaper cuts, threshes and deposits in sacks forty-eight acres of grain, employing but four men costing from six to eight dollars.

"The seeders," says Hamilton W. Mabie, "make labor five times as efficient; the cultivator makes labor ten times as efficient; the potato digger makes labor twenty times as efficient; the harrow makes labor 100* times as efficient."

The latest cotton harvester, employing a team, a driver and one helper, does the work of forty handpickers. The modern grain header will harvest forty acres per day. A modern steam threshing machine does as much labor as 150 men threshing with the primitive flail. In round figures, the Eleventh Census says that "with the modern machinery a man can do the work of two men in preparing land for cultivation and

*This estimate from Mabie seems a little high.

can do the work of nine men in harvesting, as compared with what he formerly did."

We may summarize the results of these inventions on the price of agricultural produce by quoting from the Senate report of Feb. 15, 1894, on "Agricultural Depression," in which it is shown that the cost of production of wheat in California is but 22 cents per bushel, and in North Dakota does not exceed 35 cents. Now, when we consider that the surplus of this 22-cent and 35-cent wheat from these two states exceeds two-fifths of our total exports of wheat, it becomes evident that this fact must have a determining influence in lowering the general price of wheat. Again, our exports of wheat to the world's market have radically decreased since 1880 as shown by this table.

TABLE 10.

PERCENTAGE OF WORLD'S MARKET SUPPLIED BY AMERICAN WHEAT.

(Senate Report "Causes of Agricultural Depression," p. 28.)

1880.....	69.13 per cent.	1885.....	35.44 per cent.
1881.....	55.70 per cent.	1886.....	47.95 per cent.
1882.....	49.78 per cent.	1887.....	41.96 per cent.
1883.....	34.86 per cent.	1888.....	19.90 per cent.
1884.....	40.34 per cent.		

This has been due to the opening up in recent years of immense tracts of fertile farm lands in Russia, Egypt, Australia and the Argentine Republic. This shows a decrease in our contribution of wheat to the world's market within eight years of 69.13% to 19.9%. Since 1888 our average contribution has been 35%.

Let us see how this decreased demand abroad has been met by the market at home. Take the periods from 1873 to 1888. We find that the

total product of cereals during that period increased from 1,538,892,891 bushels to 3,209,742,000 bushels (Report "Agricultural Depressions," page 20)—an increase of over 100%, while the increase of population, which should furnish the domestic market for this increase of cereals has only increased from 1873 to 1888 from 41,677,000 to 59,974,000 (Report of Sec. of Treas., page CXV for 1894)—an increase of only 44%. Thus we see that from 1880 to 1888 our supply of exports of wheat to the world's market decreased from 69.13% to 19.9% and that the supply of cereals to our own national market increased over 100%, while the demand increased but 44% in increased population. As Senator Peffer says in his report on "Agricultural Depression": "The market is over-stocked." Here we see the supply of cereals has increased more than double what the demand has increased and the price accordingly must necessarily have fallen.

In summarizing the effects of improvements and machinery on the price of farm produce, we see: FIRST—That the cost of transporting one bushel of wheat from Chicago to where the surplus must find a market in Liverpool has decreased in the last thirty years 54½ cents per bushel and has lowered the price of wheat accordingly. SECOND—The inventions in farm machinery have increased the efficiency of labor from 5 to 100 fold. THIRD—The foregoing tables and facts show that our market abroad has been diminished, and that our demand for cereals at home has been only 50% of the supply since 1873. These three considerations must explain, then, at least in a great measure, the

fall in the price of farm produce, which has occurred since 1873.

WOOL.

Wool has fallen rapidly in price since 1873. This fact is painted in glowing letters and pointed out by the silver advocates as proof that the farmer has suffered from the demonetization of silver since 1873. That wool has fallen no one disputes—the farmer receives this as self-evident, but while it is unfortunate that the price of American wool has fallen, the question for intelligent men to answer is, "What has caused this fall in prices?"

The tables following show the fall in the prices of wool, taken from several sources.

TABLE 11.

RELATIVE PRICES, TAKING 1860 AS A BASIS OF 100.
(Report of the Aldrich Committee, Page 38, Part 1.)

	Wool, Ohio, medium fleece, scoured.	Wool, Ohio, fine fleece, scoured.		Wool, Ohio, medium fleece, scoured.	Wool, Ohio, fine fleece, scoured.
1850	81.0	81.2	1871	115.5	104.1
1851	87.3	83.4	1872	155.3	152.9
1852	79.9	79.8	1873	120.4	116.8
1853	113.0	104.4	1874	117.6	112.4
1854	91.5	89.0	1875	112.3	102.0
1855	79.6	83.7	1876	95.4	84.9
1856	96.1	102.2	1877	94.0	88.8
1857	102.5	99.5	1878	88.7	72.9
1858	79.2	80.5	1879	81.3	70.0
1859	100.4	106.6	1880	118.0	100.2
1860	100.0	100.0	1881	102.5	93.2
1861	81.7	80.7	1882	101.4	88.3
1862	107.7	91.7	1883	95.4	83.9
1863	166.9	147.8	1884	83.1	78.5
1864	195.8	172.7	1885	74.6	69.5
1865	180.6	162.0	1886	80.3	72.2
1866	138.7	128.0	1887	85.9	71.5
1867	112.3	110.5	1888	77.1	66.3
1868	99.6	86.6	1889	85.9	71.7
1869	104.6	88.3	1890	83.5	71.5
1870	97.9	87.6	1891	81.7	69.0

This table shows that from 1860 the fall in wool prices has been 31%. Since 1873 the table shows a fall of 40%. The prices from 1862 to 1879 are currency prices, however, and reducing the 1873 price to gold, when currency was worth 88%, it shows the actual fall of gold prices to be only 33%.

The following table shows the average fall as given in the statistical abstract for 1894.

TABLE 12.

(From data furnished by Mauger & Avery.)

1870	.48	1881	.47
1871	.47	1882	.44
1872	.70	1883	.40
1873	.70	1884	.40
1874	.58	1885	.34
1875	.55	1886	.35
1876	.48	1887	.33
1877	.46	1888	.35
1878	.44	1889	.34
1879	.34	1890	.33
1880	.50	1891	.33

The prices of 1872-83 and 1892-93 are panic prices, and can not fairly be used.

Taking 1870 and 1891 as fair dates for an estimate, we see that the fall in price per pound of wool has been from 48c in 1870 to 33c in 1891 —a fall of 33⅓%. Between 30 and 35% may then be accepted as the fall in prices of wool since 1873, and 31% as the fall since 1860. This is for fine wool. The fall has been much less in medium wool, falling only 19% since 1860, as will appear from the foregoing table and only 24% (in gold prices) since 1873.

What has caused this fall? The price of wool, like all other commodities, is fixed by the relation of the total supply to the total demand. This total increase and demand since 1873 may be measured approximately by the increase in

population. What has this been? The only available estimate of the world's population at these various dates is furnished in 1874 by Behm Wagner as 1,391,000,000; in 1891, by Drs. Wagner and Supan, as 1,487,000,000—an increase from 1874 to 1891 of about 6.4%. Since 1860 the population of the world has increased about 20%.

Now, how has the SUPPLY of wool been increased since these dates? From the report of the Ohio Wool Growers' Association, 1894, page 292, we are told that the world's supply of wool was about 481,000,000 pounds in 1857. In 1893, it was 2,600,000,000 pounds, an increase of about 540%. Take another authority—the report of the London Board of Trade (From North's Wool Book).

THE WORLD'S SUPPLY OF WOOL SINCE 1860.

(From North's Wool Book.)

1860.	1870.	1880.	1889.	1891.
955,000,000	1,295,000,000	1,626,000,000	1,950,000,000	2,456,773,000

This table shows that the supply since 1860 has increased in the world 147%, and that while the population of the world has increased about 20% since 1860, the supply has increased over 147%; that while from 1874 to 1891, the population increased 6.4%, the supply of wool has increased nearly 100%. From 1889 to 1891, only two years, there has been the remarkable increase in the amount of wool in the world of over 25%. This astonishing increase is due to the opening up of immense tracts of fertile land all over the world.

TABLE 13.

INCREASE IN VARIOUS COUNTRIES.

(Report Ohio Wool Growers' Assn., page 292.)

	1857. Pounds.	1893. Pounds.	Per cent. Increase. Pounds.
Australia	30,000,000	250,000,000	733
Argentine Republic...	10,000,000	110,000,000	1000
Cape Good Hope.....	10,000,000	50,000,000	500

This immense increased production has been at prices far below the American price, and the inevitable consequence was a reduction in wool prices. This would have occurred whatever the conditions affecting the money standard. While it is unfortunate that foreign competitors have arisen who gorge the world's market with their product, yet it must be remembered that such a misfortune cannot be remedied by changing the monetary unit.

DECREASED PRICES OF MANUFACTURE.

One of the few manufactured articles, concerning which there are sufficient statistics extant to justify any conclusion as to the effect of inventions and improvements on prices, is pig iron. The only authentic investigation ever made is the report of the Commissioner of Labor in 1890. On page 93 of that report is a table compiled from the 10th Census, volume XX, page 111, which shows that in 1873 the labor cost in producing one ton of pig iron was $5.11, and in 1880, due to improved methods of production, had fallen to $2.80 per ton, while on page 71 of the same labor report of 1890, we see that in 1890 an average of all establishments shows the labor cost to be $1.49 per ton, a fall of 70.6%. The effect in England has not been so marked, and yet the decrease in the cost of production

illustrates the fact that inventions are rapidly lowering prices. On page 99 of the labor report above mentioned is the following table, covering a period from 1877 to 1890.

TABLE 14.

LABOR COST PER TON IN MAKING PIG IRON.

1877	1.006	1882	.9336
1878	.9280	1887	.7810
1879	.8451	1888	.6810
1880	.9584	1889	.7228
1881	.9428	1890	.8031

These statistics on pig iron are only representative of figures on steel rails, ingots, and all other heavy metal products. When we consider that the labor cost in producing them has decreased over 70%, together with the cheaper transportation rates previously discussed, then the fall in prices is seen to be a natural consequence of invention and improvement. In manufactures, the inventions and improvements have been the most marked. Here the labor is minutely subdivided and each man performs some specific part in the production of the simplest articles. Labor thus becomes wonderfully skillful in its special duty, and the result is that the product per capita is increased in a remarkable degree.

Take, for instance, the work on a daily newspaper. With an old handpress a few hundred copies could be printed in an hour, which had then to be folded by hand. To-day the latest improved presses can be run by a single man, and will turn out from fifty thousand to seventy-two thousand papers per hour, cut, printed and folded, ready for the street. This illustrates the economy of labor practiced in every industry.

Again, labor has been made more efficient by its emancipation from legal and social burdens and restraints. Another element which has cheapened prices is the use which has been made of the by-products and waste materials by modern industries. Schoenhof says, in his "History of Money and Prices," that "the commercial value given these products is of essential importance."

FACILITY OF EXCHANGE.

The facilities of business exchange have been greatly improved in the last two decades. The reception and disposal of goods are now expeditious and rapid. This is due to a variety of causes—the use of telegraphs and telephones, the improved methods of money exchange, the peaceful and healthy industrial conditions previous to the recent prices, and other influences. All have tended to facilitate the exchange of commodities and, therefore, to lower their prices.

From a survey of this chapter it must appear that, disregarding the question of a change in the intrinsic value of gold, the effects: FIRST, of cheapened transportation rates; SECOND, of machinery and inventions; THIRD, of improved facilities of exchange; and FOURTH, of the contraction of the world's market for our produce, due to new competitors, have been sufficient to explain the fall in prices which has occurred. Indeed, Edward Atkinson, the great statistician, asserts that the fall in prices has been more marked than would appear from its measure in the gold dollar, and that it is more probable, therefore, that the gold dollar has fallen more in intrinsic value than it has risen.

CHAPTER IV.

THE COURSE OF PRICES.

There has been endless dispute concerning the fall in prices which has occurred since 1873.

(1) What has caused this fall? This is considered and answered in Chapter III.

(2) How much have prices fallen since 1873? The wildest calculations and estimates are made by the uninformed on both sides of the money question, and a sound estimate is indispensable to a fair consideration of the issues involved.

Foreseeing the value of a record of prices kept from year to year, several men, including Sauerbeck, Kral, Soetbeer, and the London economists, preserved a record of prices in various markets which felt the influences of the world's commercial condition, viz., London and Hamburg. These records are fortunately available for the student, and are invaluable in determining the course of prices. Beginning with 1845, the London economists selected twenty-two of the great staple articles and kept a record of their prices. Then each succeeding year they took the prices of these twenty-two articles and compared the average price of these commodities with the average price of 1845 as a basis. This record shows the changes and fluctuations of the average prices of these twenty-two articles for each succeeding year to the present time.

The tables compiled by Sauerbeck were also

from the London market, and cover forty-five articles. The table of Soetbeer and Kral were taken in the Hamburg market. Soetbeer covered 114 staple articles and Kral's record covers 265 articles, from 1845 to 1884.

In 1893 the Aldrich Committee was appointed by the Senate to investigate the history of prices in the United States, and made an exhaustive investigation, covering 90 articles, from 1840 to 1860, in the various great markets of the country, and covering 223 articles since 1860. The best possible methods have been employed by the committee, and their statistical tables may be accepted as the most reliable facts which are available on the history of prices.

The following table is a compilation of the tables of Soetbeer, Sauerbeck, Kral, the London economists and the Aldrich Committee. Each table, excepting Kral's, represents the relative average prices up to 1891, taking 1860 as the basis of 100. Kral's table takes 1871 as the basis of 100, and ceases at 1874.

TABLE 15.

INDEX FIGURES ON PRICES FROM VARIOUS AUTHORITIES.

	Soetbeer.	Sauerbeck.	Kral.	Aldrich.	London Economist.
1851.....	82.8	77.1	99.95	105.9	.....
1852.....	84.1	80.8	99.95	.....	.....
1853.....	94.	96.6	99.95	.....	.....
1854.....	100.2	106.2	99.95	.....	.....
1855.....	102.7	103.1	99.95	.....	.....
1856.....	111.9	102.8	104.39	.....	.....
1857.....	107.5	106.9	104.39	.....	.....
1858.....	93.8	93.3	104.39	.....	.....
1859.....	96.2	95.2	104.39	.....	.....
1860.....	100.	100.	104.39	100.6	102.
1861.....	97.6	99.6	95.42	100.6	102.
1862.....	101.4	105.5	95.42	114.9	109.
1863.....	103.7	109.3	95.42	102.4	125.9
1864.....	106.9	112.3	95.42	122.5	144.8

TABLE 15—Continued.

	Soetbeer.	Sauerbeck.	Kral.	Aldrich.	London Economist.
1865.....	101.4	105.8	95.42	100.3	135.5
1866.....	104.	106.5	100.47	136.3	133.
1867.....	102.9	103.9	100.47	127.9	115.3
1868.....	100.8	103.1	100.47	115.9	99.3
1869.....	102.	101.9	100.47	113.2	105.
1870.....	101.6	100.3	100.47	111.3	105.5
1871.....	105.	102.6	100.	122.9	100.8
1872.....	112.1	112.5	108.54	127.2	108.8
1873.....	114.3	116.6	112.85	122.	114.6
1874.....	112.6	107.	112.14	119.4	110.2
1875.....	107.3	100.3	108.54	113.4	103.9
1876.....	106.1	97.5	104.33	104.8	102.4
1877.....	105.6	97.4	101.60	104.4	101.5
1878.....	91.7	91.2	98.09	99.9	94.1
1879.....	96.8	86.7	95.43	96.6	80.7
1880.....	100.8	91.8	98.91	106.9	92.2
1881.....	100.1	88.5	98.48	105.7	86.1
1882.....	101.	88.	96.95	108.5	88.6
1883.....	101.	86.	95.	106.	84.6
1884.....	94.4	79.3	90.57	99.4	82.5
1885.....	89.9	75.4	.....	93.	77.3
1886.....	86.	72.4	.....	91.9	73.3
1887.....	94.3	70.7	.....	92.6	75.3
1888.....	84.3	73.9	.....	94.2	80.
1889.....	87.7	76.7	.....	94.2	79.6
1890.....	89.4	76.	.....	92.3	82.3
1891.....	90.3	75.4	.....	92.2	81.

Now, then, taking the above table with its history of prices from the various accepted authorities, we may estimate from each table what has been the per cent. of fall in prices since 1860, and also since 1873. The result is contained in the following table.

TABLE 16.

FALL OF PRICES UP TO 1891.

Only 5 Great Investigations and Records.

Since.	Soetbeer. pr cnt.	Sauerbeck. pr cnt.	Kral. pr cnt.	London Economist. pr cnt.	Aldrich. pr cnt.	Avrge.
1860-1891....	9.7	24.6	5	19	7.8	13.22
1873-1891....	21	35.5	19	29	24	25.7

This shows from a simple comparison of prices in each table that the fall in prices since 1860 is estimated as low as 7.8% (excluding

Kral, who stopped at 1884) by the Aldrich Committee to 24.6% by Sauerbeck. (This apparent discrepancy is perhaps due to a real difference in the course of prices in England and the United States.) The simple average of the five results in the table above shows the fall of prices to be 13.22% from 1860 to 1891.

From a similar comparison of the tables from 1873 to 1891 we see that the tables show a fall in prices since 1873 varying from 21%, as given by Soetbeer, to 35.5%, as given by Sauerbeck. The average fall in prices since 1873, taking all five tables, is 25.7%. This average, of course, is based on a supposition that each table is of equal value. The table of the Aldrich Committee, however, may be accepted as more approximately the true fall in prices, and shows that the fall in prices since 1860 in this country has been 7.8%, and since 1873 has been 24%.

Following is a graphic chart showing the course of currency prices and gold prices from 1840 to 1890, taken from the report of the Aldrich Committee. Naturally the currency prices rose very rapidly during the era of depreciated currency from 1862 to 1879. The gold prices continued far more uniform throughout, and are the only fair basis for study of the trend of prices. (See Chart No. 1, page 53.)

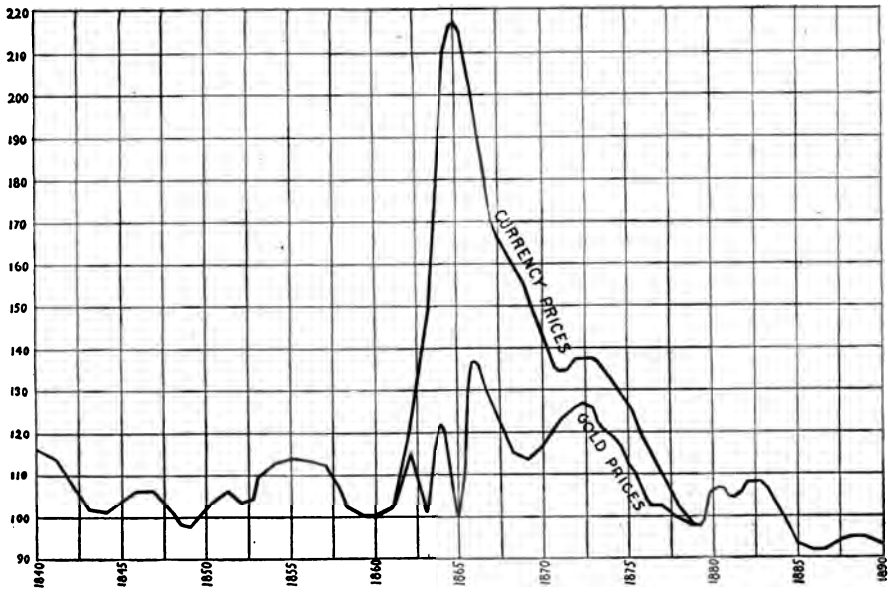
Thus far we have considered the general level, or the course of all prices taken together. It is commonly asserted that the farmer has suffered most severely from the fall in prices. Let us consider the facts in the matter. We find a very thorough compilation of agricultural prices, furnished by the Senate report of 1893, on

CHART No. 1.

Graphic Line Showing Course of Prices in Gold and Currency.

1860 Taken as 100.

(Compiled from Aldrich Report on Wholesale Prices and Wages, pp. 93 and 99.)



"Wages, Prices and Transportation Rates." This table covers the fifteen great staple agricultural products, viz., barley, clover seed, corn, cotton, flaxseed, hemp, hides, meat (beeves, hogs and sheep), oats, rye, timothy seed, tobacco, and wheat. The most important are given in the following table, which gives the course of prices since 1840, taking 1860 as the basis line of 100.

TABLE 17.

ALDRICH REPORT ON WHOLESALE PRICES AND WAGES.

Relative Prices of Agricultural Products and Individual Products.

Year.	Barley.	Corn.	Cotton Up. Middling.	Oats.	Tobacco.	Wheat
1840	83.1	85.1	83.2	102.0	94.1	72.8
1841	88.3	103.3	85.5	126.8	91.2	61.6
1842	70.8	85.1	68.2	70.6	55.9	95.6
1843	71.4	74.9	78.6	69.9	58.8	56.3
1844	73.4	71.3	55.5	86.3	51.5	70.2
1845	77.3	83.6	70.5	105.9	60.3	71.2
1846	81.2	....	85.5	100.7	57.4	92.2
1847	90.9	96.7	107.5	142.5	69.1	81.4
1848	100.0	112.0	62.4	89.5	61.8	88.3
1849	81.2	93.8	97.1	94.1	79.4	78.3
1850	101.9	95.3	129.5	111.1	102.9	76.4
1851	103.9	90.9	84.4	104.6	103.1	70.2
1852	98.7	102.5	93.6	118.3	73.5	64.2
1853	109.1	120.4	98.8	127.5	76.8	81.7
1854	151.0	109.8	86.1	132.7	78.5	122.0
1855	162.3	125.5	91.3	117.6	73.7	152.4
1856	161.0	99.6	113.3	117.6	124.1	131.2
1857	116.9	102.2	143.4	117.6	174.4	107.0
1858	142.9	104.0	123.7	134.6	134.4	76.2
1859	111.7	133.8	106.4	108.5	100.7	96.6
1860	100.0	100.0	100.0	100.0	100.0	100.0
1861	84.4	79.3	198.8	90.2	95.3	92.3
1862	77.3	86.5	522.5	150.3	186.9	86.7
1863	168.8	126.2	781.5	183.7	178.3	101.2
1864	240.3	229.8	1,119.1	227.5	200.2	116.4
1865	165.6	132.4	453.2	156.9	125.8	140.5
1866	181.8	138.2	365.3	149.0	107.7	115.9
1867	191.6	192.7	198.8	198.7	137.9	213.4
1868	250.0	164.4	247.4	189.5	166.5	193.0
1869	178.6	141.1	254.3	167.3	168.0	119.1
1870	142.9	126.5	156.1	139.9	158.1	84.7
1871	130.1	110.5	182.7	138.6	187.5	113.2
1872	136.4	93.8	173.4	115.0	181.0	113.5

TABLE 17—Continued.

Year.	Barley.	Corn.	Cotton Up. Middling.	Oats.	Tobacco.	Wheat
1873	178.6	97.1	169.9	136.6	215.5	130.3
1874	152.6	139.3	143.4	158.8	180.2	121.5
1875	149.4	96.4	121.4	117.6	160.8	94.6
1876	128.2	82.5	101.7	112.4	145.7	101.3
1877	110.4	84.7	102.9	88.9	148.9	117.2
1878	146.1	70.7	99.4	75.8	137.4	106.6
1879	129.9	76.4	96.0	94.1	119.3	84.2
1880	116.9	75.4	106.4	110.1	137.8	112.3
1881	149.4	109.3	109.2	119.6	134.4	93.3
1882	122.1	100.7	105.8	103.4	141.1	116.4
1883	....	90.2	98.3	92.0	138.2	88.8
1884	110.4	89.5	93.6	81.5	152.6	83.5
1885	100.0	71.5	93.1	86.6	122.3	71.1
1886	103.9	68.1	87.9	93.5	100.6	74.0
1887	102.6	75.1	87.9	92.6	122.5	73.6
1888	110.4	75.1	96.5	78.1	110.3	71.0
1889	89.3	57.8	100.6	68.3	122.2	86.0
1890	101.0	81.7	96.0	114.7	129.8	70.8
1891	92.9	89.1	80.3	86.6	140.0	87.7

This shows the great extremes in the course of agricultural prices, wheat falling 32.7% from 1873 to 1891, while rye rose 9%.

The average course of the above named fifteen articles is given in the following table which shows that agricultural prices, estimated in gold, on the average, have fallen 2.9% from 1860 to 1891, and that they have fallen 17.4% from 1873 to 1891.

TABLE 18.

ALDRICH REPORT ON WHOLESALE PRICES AND WAGES.

Average Prices of Agricultural Products, in Gold, 1860-1891.

Year.	Simple average of 15 products.	Year.	Simple average of 15 products.
1860	100.0	1869	119.8
1861	91.7	1870	121.1
1862	128.5	1871	117.8
1863	121.7	1872	118.4
1864	167.1	1873	117.7
1865	90.0	1874	123.4
1866	122.6	1875	112.1
1867	127.3	1876	102.0
1868	124.8	1877	104.2

TABLE 18—Continued.

Year.	Simple average of 15 products.	Year.	Simple average of 15 products.
1878	97.0	1885	93.9
1879	98.4	1886	96.5
1880	109.9	1887	94.9
1881	121.1	1888	95.7
1882	114.4	1889	91.3
1883	100.3	1890	97.4
1884	104.7	1891	97.1

It will be noticed that average gold prices were higher in 1881 than in 1873; that the great fall in prices of agricultural produce commenced when the production of cereals began to be so enormous, as compared to the growth of the population.

The foregoing table of the individual cereals above shows the prices of these cereals measured in greenbacks. The only fair basis of comparative prices for 1873 and 1891 must be in gold. The currency dollar in 1873 represented 89 cents of gold. Now, if we reduce the current prices to a gold basis, how do prices compare for 1873 and 1891? In corn we notice a rise in price of about 2%. And the table also shows that in 1881 and 1882 corn was higher than in 1873. Wheat fell 24%, while it was higher in 1881 (measured in gold) than in 1873. (The causes of this fall are fully explained in the Chapter on "Inventions," etc.) Rye rose 22% in price, and was higher in 1880 and 1881 than in 1873.

The value of the corn crop far exceeds the value of the wheat crop of the United States. The following table gives the condensed statistics of the twelve great corn-producing states.

TABLE 19.

	Produce.	Farm values of Corn in Currency.	Value. per bushel in Currency.
1870-1884.....	3,068,393,000	$1,160,073,980	37.8c
1874-1879.....	4,822,640,200	1,397,138,016	29.
1880-1884.....	5,290,449,192	1,978,820,424	33.2
1885-1889.....	6,175,139,000	1,733,845,695	28.1
1890-1894.....	5,243,462,833	1,909,110,561	36.4

The prices given are measured in currency. The currency and gold prices differed only up to 1879. From 1870 to 1874 the average paper dollar represented 88.3 cents in gold; hence, while the currency prices of corn from 1870 to 1874 appear as 37.8 cents per bushel, they are really only 33 cents per bushel, measured in gold. It is evident, then, that corn prices are higher than they were about 1873.

It will become apparent from a comparison of the fall of prices of agricultural produce, and the fall of prices in general, that agricultural prices have not fallen nearly as much as other prices.

AGRICULTURAL PRICES PER CAPITA PRODUCTION.

EFFECT OF PRODUCTION UPON PRICES.

In the preceding part of this Chapter we have treated specially the causes of the fall in the prices of wheat and wool. We will now see how the market for all American farm produce has been restricted since 1870. Halford Erickson, the State Statistician of Wisconsin, has kindly assisted us in this investigation. The summarized statistics which are in his report relating to the changes in production, prices and markets, of all cereal crops and farm products, from 1870 to 1896, are perhaps the most comprehensive and instructive ever compiled.

The price of farm produce is certainly fixed

by the law of supply and demand. The price is fixed by the supply of the produce as compared with the demand for it. We will therefore try to determine the relation between the supply and demand in 1870 and 1896. The market for cereals is furnished by the population which consumes them, and as the power of consumption per capita remains about the same from year to year, we can use this consumptive power in determining the demand for these cereals. If the population has increased more than the production of cereals since 1870, then the prices of cereals should have naturally risen. On the other hand, if the population has increased less than the production of cereals, then the demand, compared with the supply, is small, and we would naturally expect prices to fall. The following investigation will reveal to us the fact that the supply of cereals in the United States has actually increased per capita, therefore a fall in the price of cereals should be expected. Let us investigate the following tables on this subject.

TABLE 20.

CORN.

Total production and value of, yearly, from 1870 to 1896, including value per acre and bushel and production per capita.

(Erickson, Wisconsin Statistician).

Years.	Total production.	Total area of crop.	Total value of crop.
1870-75, Average 5 years.....	992,258,900	37,559,803	$502,498,064
1875-80, Average 5 years.....	1,876,715,008	49,782,859	$506,644,032
1880-85, Average 5 years.....	1,575,194,107	66,045,016	$704,370,177
1885-90, Average 5 years.....	1,831,692,000	75,041,898	$633,514,561
1890-96, Average 6 years.....	1,693,665,460	72,582,750	$657,645,534

TABLE 20—Continued.

Years.	Average value per bushel.	Average value per acre.	Average production per capita.
1870-75, Average 5 years.....	$0.51.1	$13.39	24.40
1875-80, Average 5 years.....	$0.36.8	$10.21	29.60
1880-85, Average 5 years.....	$0.45.9	$10.69	29.94
1885-90, Average 5 years.....	$0.35.2	$8.45	30.80
1890-96, Average 6 years.....	$0.39.8	$9.08	25.60

Corn is rightly said to our most important national crop. Special attention should be given to the variations in the per capita production in this grain.

The latter half of the ninth decade, or from 1885 and 1889, shows a larger production than either of the other periods in this table, the average of the five crops being 30.80 bushels per capita. The six crops from 1890 to 1895 show a decline in the average production per capita below that of the crops from 1885 to 1890 of 5.20 bushels per capita and a rise in the average value of 4.6 cents. During this period there were several short crops. The one in 1894, for instance, fell to 17.70 bushels to the person, causing an advance of 9 cents per bushel in the price. This advance, however, was more than offset by the enormous fall after the large crop of this year (1895)."

TABLE 21.

OATS.

Total production and value of, by years, from 1870 to 1896, including value of crop per acre and bushel and production per capita.

(Erickson, Wisconsin Statistician).

Years.	Total production.	Total area of crop.	Total value of crop.
1870-75, Average 5 years.....	257,095,280	9,361,617	$105,449,146
1875-80, Average 5 years.....	371,786,964	12,792,026	$116,701,300
1880-85, Average 5 years.....	495,509,478	18,628,029	$174,957,858
1885-90, Average 5 years.....	673,272,200	25,364,721	$186,734,965
1890-96, Average 6 years.....	674,739,252	26,875,342	$204,943,740

TABLE 21—Continued.

Years.	Average value per bushel.	Average value per acre.	Average production per capita.
1870-75, Average 5 years.....	$0.41.3	$11.28	6.33
1875-80, Average 5 years.....	$0.31.7	$9.15	7.96
1880-85, Average 5 years.....	$0.36.0	$9.48	8.40
1885-90, Average 5 years.....	$0.27.8	$7.39	11.45
1890-96, Average 6 years.....	$0.31.1	$7.50	10.20

A very rapid increase is shown in the production of oats. The increase of the fifth period over the first was 162 per cent. The great increase shown by the first comparison is due to the fact that the crop of 1895 was the largest in the time covered by the table. The price per bushel fluctuated from 52 cents to 19 cents, but has averaged about 33 cents. Per capita production has increased until the last period when it fell slightly, causing a corresponding rise in the price.

The following is the production of wheat per capita in the United States.

TABLE 22.

(In bushels.)	Average production per capita.
1870 to 1874.....	6.40
1875 to 1879.....	7.77
1880 to 1884.....	8.83
1885 to 1889.....	7.41
1890 to 1895.....	7.17

Notice that there has been an increased production per capita since 1870. And as our exports during this time have somewhat decreased, we have a larger per capita supply in this country to-day than we had in 1870.

The following table shows the value per bushel of the commodities named, in averaged periods of five years each.

TABLE 23.

AVERAGE VALUE OF ONE BUSHEL OF WHEAT, CORN, OATS, RYE, BARLEY, BUCKWHEAT AND POTATOES DURING PERIODS OF FIVE YEARS, FROM 1870 TO 1895, INCLUSIVE.

(Erickson, Wisconsin Statistician.)

Crops.	Average value from 1870 to 1874.	Average value from 1875 to 1879.	Average value from 1880 to 1884.	Average value from 1885 to 1889.	Average value from 1890 to 1894.
Wheat.....	$1 12	$1 00	$0 91.5	$0 75.2	$0 65.8
Corn.....	51.1	36.8	45.9	35.2	39.8
Oats.....	41.3	31.7	36.0	27.8	31.1
Rye.....	79.7	64.2	68.0	56.4	50.9
Barley.....	84.5	65.7	63.3	55.7	44.7
Buckwheat..	81.4	64.9	71.9	60.5	57.3
Potatoes.....	65.9	50.6	55.3	46.8	39.8
Total....	$5 16	$4 14	$4 32	$3.58	$3 29
Average.	73.8	59.1	61.8	51.1	47

This shows that the average price of the seven commodities used has fallen 56.58 per cent. from the first to the last period. And that they have fallen from 73.8 cents to 47 cents per bushel during the same time.

The next table shows the value of one acre's yield of each of these seven products. Also, the total and average of eight acres' yield of each of these commodities for the same period.

TABLE 24.

AVERAGE VALUE IN PERIODS OF FIVE YEARS OF ONE ACRE EACH, OF WHEAT, CORN, OATS, RYE, BARLEY, BUCKWHEAT, POTATOES AND HAY FROM 1870 TO 1895 INCLUSIVE.

(Erickson, Wisconsin Labor Statistician.)

Crops.	1870 to 1874	1874 to 1879.	1880 to 1884.	1885 to 1889.	1890 to 1895.
Wheat.....	$13.71	$12.50	$11.08	$8.82	$8.35
Corn.....	13.39	10.21	10.69	8.45	9.08
Oats..... ...	11.28	9.15	9.48	7.39	7.50
Rye.....	10.89	9.21	8.59	6.42	6.74
Barley.....	18.53	14.54	14.17	12.17	9.96
Buckwheat....	14.89	11.12	8.94	7.80	8.67
Potatoes.....	56.96	43.59	41.77	34.07	30.95
Hay.....	16.67	11.96	12.07	10.09	10.13
Total.....	$156.34	$122.28	$116.79	$95.21	$91.38
Average...	19.54	15.28	14.52	11.90	11.42

According to this table the average value of the production of an acre of these commodities has fallen 41% since 1870.

Extensive tables on farm animals are also given in this report, and the results show about the same.

The period covered is the same as in the foregoing tables dealing with the cereals and the same form of tables are used. On the whole, what has been said about the cereals might also be said of farm animals. When the supply has outrun the demand lower prices have followed. With the exception of cattle, the increase in relation to production has been smaller than of other products. In hogs and sheep there is a decrease since 1870, and since 1890 there has been a decrease in all but horses. This decrease in number while prices also were falling shows how much too large the supply must have been during the fourth period.

The following statistics show the average value per head of farm animals from 1870 to 1896.

TABLE 25.

CATTLE, MILCH COWS, SWINE, SHEEP, HORSES AND MULES.

Average value per head in each five year period from 1870 to 1895.

	Average value per head from 1870 to 1874.	Average value per head from 1875 to 1879.	Average value per head from 1880 to 1884.	Average value per head from 1885 to 1889.	Average value per head from 1890 to 1896.
Cattle.....	$20.82	$17.46	$19.97	$19.30	$14.56
Milch cows.....	33.16	26.60	26.98	26.49	22.00
Swine.....	5.20	5.23	5.45	4.90	5.16
Sheep.....	2.46	2.39	2.35	2.05	2.25
Horses and mules	78.55	64.79	64.79	73.58	59.06
Totals.....	$140.19	$116.52	$119.54	$126.32	$103.03
Average.....	28.04	23.31	23.91	25.36	20.60

These show a fall in price of farm animals from $28.04 per head to $20.60 per head, or a fall of about 26%.

The next table shows the average number of farm animals per thousand inhabitants, in each of the five-year periods from 1870 to 1896.

TABLE 26.

CATTLE, MILCH COWS, SWINE, SHEEP, HORSES AND MULES.

Average number to 1,000 inhabitants in each five year period from 1870 to 1895.

(Erickson, Wisconsin Statistician).

	Number to each 1,000 inhabitants from 1870 to 1874.	Number to each 1,000 inhabitants from 1875 to 1879.	Number to each 1,000 inhabitants from 1880 to 1884.	Number to each 1,000 inhabitants from 1885 to 1889	Number to each 1,000 inhabitants from 1890 to 1896.
Cattle.....	386	394	464	558	550
Milch cows.....	245	242	241	248	244
Swine.....	740	630	760	780	730
Sheep.....	835	773	872	773	690
Horses and mules	245	250	243	150	226
Totals.....	2,451	2,289	2,580	2,609	2,470
Average.....	490	458	516	522	494

This table shows that the market was overcrowded in numbers before 1890, by the falling off of animals of all kinds except horses and mules.

The following table gives the average yearly production per capita of the seven commodities named as averaged in periods of five years each, from 1870 to 1896.

TABLE 27.

AVERAGE PRODUCTION OF WHEAT, CORN, OATS, RYE, BARLEY, BUCKWHEAT AND POTATOES IN BUSHELS PER CAPITA, IN PERIODS OF FIVE YEARS, FROM 1870 TO 1895 INCLUSIVE.

(Erickson, Wisconsin Statistician).

	Average production per capita from 1870 to 1874.	Average production per capita from 1875 to 1879.	Average production per capita from 1880 to 1884.	Average production per capita from 1885 to 1889.	Average production per capita from 1890 to 1895.
Wheat.....	6.40	7.77	8.83	7.41	7.17
Corn.....	24.40	29.20	29.90	30.80	25.60
Oats.....	6.33	7.96	8.50	11.45	10.20
Rye.....	.37	.46	.49	.41	.40
Barley.....	.71	.84	.93	1.06	1.10
Buckwheat.....	.20	.24	.20	.21	.19
Potatoes.....	2.76	3.30	3.21	3.20	3.41
Total.....	41.17	49.07	52.06	54.54	48.07
Average.....	5.88	7.11	7.42	7.79	6.87

It shows an increase per capita in every cereal, except buckwheat. The average per capita increase in all cereals given is from 41.17 bushels to 48.07 bushels. This is an increase of 6.9 bushels per capita, remember not total supply, but per head of population. This is equivalent to an increase of 16.76 per cent. This, it must be remembered, is for the last few years when production has greatly fallen off. If we compare the periods, 1872-74 and 1885-89, we notice a much greater per capita increase in the production. It is about 32.17%. It was this great increase that caused the agricultural prices to break at that time and begin to fall rapidly.

The following table shows the increase in the population as compared with the increase in the production of the various articles of farm products. The comparison is made between the periods 1870 to 1876, and 1890 to 1896.

TABLE 28.

INCREASE IN POPULATION AS COMPARED WITH INCREASE IN PRODUCTION OF CEREALS.

(From the advance sheets of Erickson's report.)

	Percentage of Increase.		Percentage of Increase.
Population	62.74	Production of Barley	151.40
Production of Wheat	81.07	Number of Cattle ..	125.64
Acreage of Wheat ...	70.9	Number of Hogs ...	56.6
Production of Corn .	93.24	Production of Oats	162.08
Production of Hay ..	147.52	Acreage of Oats	187.08
Acreage of Hay	141.98		

It becomes evident from this table that the supply of cereals has increased much faster than the consuming power. This is the explanation for the great fall in the price of these products. In connection with this it must not be forgotten that the foreign markets for our cereals have been greatly decreased by wider and cheaper competition. From furnishing 69.17% of the world's market in 1880, we have come to furnish only 19.9% of the same market in 1888, and an average of 35% since that date.

"We see from the above table that during the last twenty-six years production has completely outstripped population. While population increased 62.74 per cent. during this period, production of wheat increased 81.07 per cent., of corn 89.90 per cent., of oats 162.08 per cent., of hay 147.52 per cent., the number of cattle 125.64 per cent. and of hogs 56.60 per cent.—hogs alone falling behind the increase in population. During the same period the average of each crop increased at about a corresponding ratio. Of wheat the increase in the area was 70.90 per cent., of corn 93.24 per cent., of oats 187.08 per cent., and of hay 141.98 per cent."

"This is the situation in this country. With a good foreign market the farmers might be

even more instead of less prosperous because of abundant crops. But his hopes in this direction are badly shattered by the outlook abroad."

Europe's shortage in wheat is estimated at about 125,000,000 bushel per year. In this market the Argentine Republic is threatening to become our worst competitor in the European market. In 1894 it exported over fifty million bushels of wheat, and according to Mulhall the area in wheat in 1895 was more than double that of 1893. It is also estimated that wheat is produced much cheaper in Argentine than in the United States.

Uruguay and Chili are also exporters of wheat. So is also Canada and Australia. Perhaps some of our farmers still remember the effect upon the exports of the United States of the large exports from India in 1891 and 1892. In Europe Russia is the greatest exporter and in 1895 contributed nearly one-half of the amount necessary to supply the shortage in England and other countries in Europe. And it is thought that before long Russia will alone supply the entire shortage on the continent. Where then will the American farmers find a market for their surplus."—Wisconsin Statistician.

Now, looking at these tables and diligently studying their import and significance, it must be evident to the thinking man, that while: (1) cheapening cost of production, (2) cheapened transportation rates, and (3) improved facilities of exchange, have perhaps had a great influence in lowering the prices of farm produce; but still a vital cause is the over-supply of this produce raised for the market. In other words, that the

agricultural industry has outstripped other industries, production has outstripped consumption, and as a consequence the farmer is to-day receiving a low price for his produce. Certainly these causes for lowering prices are sufficient in themselves to explain the fall in agricultural prices, without seeking for a cause in the monetary situation.

The thinking farmer will find the true cause for the fall of agricultural prices, and will not endeavor to remedy one disease by aggravating another, which will, no doubt, be more disastrous than the one he proposes to remedy.

PRICES, WAGES, AND THE LABORER.

From a comparison of the chart on the course of wages in Chapter V, and the chart on the course of prices, Chapter IV, we notice that the effect of the war and panic disturbances was imparted to prices much more quickly than to wages.

Again, we notice that the effect of the panic of 1873 was much more marked on prices than on wages. Wages fell 6% from 1873 to 1879, while prices fell 29%. This emphasizes the fact that prices are more responsive to money disturbances than wages are.

We may infer from this that the immediate effect of the proposed free silver legislation at 16 to 1 would be to increase prices more rapidly than wages, and for a time at least, the laborer's wages would decrease in purchasing power, and he would suffer accordingly.

THE EFFECT OF FREE COINAGE ON PRICES AND LABOR.

No one can claim that by the establishment

of free coinage of silver the amount of labor necessary in production, that is, the actual cost and effort of growing and manufacturing the things we eat, wear and use, will be changed. If our dollar be so changed that it will contain only half as much actual value as it does to-day, the value of all goods will remain the same, though the value is represented by twice as large figures. If Congress should declare that a foot instead of being 12 inches, should consist of only 6 inches, the size of your kitchen would not be twice its present dimensions, because to represent the same distance you would use twice the number of feet. So, if we should come to a silver basis, though an acre of land, a wagon, a horse, or a bushel of wheat would sell for twice the price they sell for to-day, that larger figure would stand for no increase in value. Let it be thoroughly understood here, that lessening the value of the money unit means an apparent increase in the value of all things bought and sold, in direct proportion to the decrease in the value of the money unit.

EFFECT ON WAGES.

While history has shown over and over again that changing the value of the money unit does not affect the amount of goods that a given weight of gold or silver will buy, it has also shown that such a change has always had a most disastrous effect upon wages. Since, under free coinage, the laborer will have to pay twice as many dollars and cents for all things he has to buy, it is plain that to be as well off as he is now he will have to receive twice as many dollars in wages as he does under the present sys-

tem. In the past, with cheapened money, and correspondingly rising prices, it has been proved that wages have always advanced, but NEVER as rapidly as prices, nor in the same degree.

A LESSON FROM ENGLISH HISTORY.

THE EFFECT OF A CHANGE IN THE WEIGHT OF THE SOVEREIGN IN THE REIGN OF HENRY VIII.

In England, under the reign of Henry VIII., in the 16th Century, there occurred a most conspicuous example of this. The gold in the pound sterling was reduced by $\frac{2}{5}$, so that the proportionate value of the money unit fell more than it would in this country under free silver. Prices of all goods IMMEDIATELY shot up in exact proportion to the lessened value of the silver coins, but for the time being wages advanced but slightly, if they rose at all, so that with the same wages the laborer had to pay three times as much for his rent, for his butter, eggs and bread. It was only when it became evident that he would not live under such conditions that wages were slowly increased. Several years later, with prices still tripled, wages were only $1\frac{1}{2}$ times as high and it took generations before the English workman's wages secured for him the same degree of comfort that they did previous to the debasement of the currency. "The misery of English workmen from 1550 to 1850, which was by far the most acute in all English history, is acknowledged by all the writers on the subject, to have had its origin in the debasement of the English currency by Henry VIII., and that practical illustration has taught the nation to NEVER

AGAIN TAMPER WITH ITS CURRENCY." The establishment by America of the free coinage of silver at a ratio of 16 to 1, independently of the rest of the world, would, beyond the shadow of a reasonable doubt, do for our money what Henry VIII. did for English money. (Rodgers' "Six Centuries of Wages and Prices," page 400.)

CHAPTER V.

THE COURSE OF WAGES.

One of the essential points in controversy is the alleged fall in wages due to the demonetization of silver in the various countries of the world since 1873. Fortunately, for an intelligent discussion of this assertion, there is available a very important report of the Aldrich Senate Committee on "Wholesale Prices, Wages and Transportation Rates." We must first determine what has been the course of money wages, that is, in dollars and cents. Following is a graphic chart showing the trend of both currency and gold wages from 1840 to the present time, taking 1860 as a base line of 100. (See Chart No. 2, page 72.)

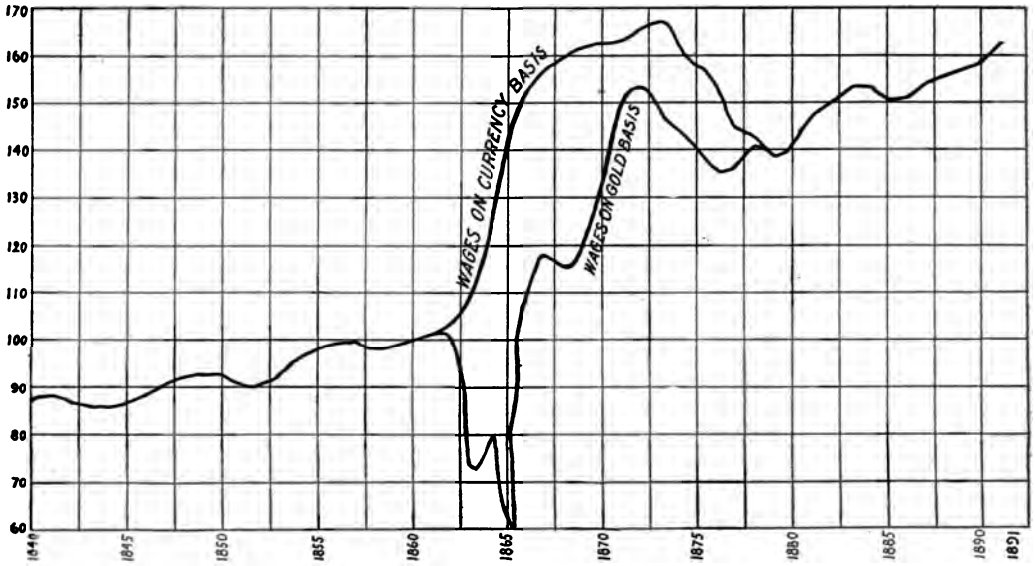
Up to 1862, the currency and gold wages were the same, but from 1862 the soundness of the currency of the country began to be questioned, and at once it fell below par. This was due to the issue of the greenbacks in 1862, and also to the uncertainties of the war. This divergence of the currency and money wages disappeared on the resumption of specie payments by the Government in 1879. Whether we consider the wages measured in gold or currency, we see that there was a steady advance in wages from 1840 to 1860. During the war gold wages fell rapidly, while currency wages rose as rapidly, due to the depreciation of the value of the paper money. The currency (greenbacks) and gold wages both reached their highest points

CHART No. 2.

WAGES IN GOLD AND CURRENCY FROM AN AVERAGE OF ALL INDUSTRIES IN THE U. S. FOR 52 YEARS.

1860 TAKEN AS 100.

(Compiled from Aldrich Report, pp. 147-180.)



in 1873. Then followed the panic and the consequent depression in business; wages fell rapidly until business began to recover about 1880, and advanced steadily up to the present time. From 1880 on, wages regained lost ground, and from 1880 to 1890 there was a healthy and gradual restoration, until average wages, in 1887, measured in gold, had reached a point equal to what they were in 1872. Wages have continued to rise since that time.

The following table shows the relative range of wages in the separate great industries for the years 1860, 1873, 1880, and 1891.

TABLE 29.

WAGES IN VARIOUS INDUSTRIES.

(Pages 173-4, Vol. 1, "Wholesale Prices and Wages," latest available.)

	1860.	1873.	1880.	1891.
Agricultural implements....	100	152.4	124.9	137.9
Ale, beer and porter.....	100	172.4	176.2	224.7
Books and newspapers.....	100	164.	140.7	148.6
Building trades.....	100	179.4	142.7	172.5
Carriages and wagons.....	100	179.9	202.4	202.4
City public works.....	100	177.5	141.5	164.6
Cotton Goods.....	100	167.2	139.9	165.1
Dry Goods.....	100	132.8	134.	133.6
Ginghams.....	100	165.5	143.8	152.7
Groceries.....	100	147.5	159.5	194.7
Illuminating gas.....	100	207.	154.3	167.7
Leather.....	100	154.9	131.3	137.6
Lumber.....	100	177.7	173.3	177.9
Metals and metallic goods..	100	160.2	134.3	148.6
Paper.....	100	190.1	158.5	182.3
Railroads.....	100	165.3	143.8	146.4
Sidewalks.....	100	200.	150.	187.5
Spice.....	100	149.2	151.6	164.2
Stone.....	100	171.3	128.7	165.2
Whitelead.....	100	140.	117.4	140.6
Woolens.....	100	158.2	151.6	167.8
All industries.....	100	167.1	141.5	160.7

These years are selected because they represent significant periods. 1860 shows the normal wages before the war, 1873 shows the high water mark of wages preceding the crisis of 1873,

and 1880 shows the date when wages started to recover, after the depression due to the panic of 1873. The wages in 1873, as given above, are, of course, currency wages, and hence appear higher than they really were. On page 179 of the Aldrich report is the following table showing the decreased hours of labor per day.

1860.	1873.	1880.	1891.
11 hours.	10.5	10.3	10.

This shows that since 1873 the hours of labor have decreased from 10.5 hours (the average in all industries) to 10 hours in 1891, or an approximate reduction of 5% in the hours of labor.

FOREIGN LABOR.

Again, we see from a study of the Census, as shown by the following statistics, 11th Census, page XCVI, part one,

TABLE 30.

Increase Foreign Born Citizens.		Inc. Native Born Citizens.	
1870-1880.....	1,112,714	1870-1880.....	10,484,698
1880-1890.....	2,564,112	1880-1890.....	9,896,863

that from 1880 to 1890 the increase of foreign laborers was over 100% greater than from 1870 to 1880, while the increase of native born laborers decreased during the same period. The natural consequence of this increased percentage of foreigners would be to lower wages.

MORE LABORERS IN CITIES.

On page LXXI, part 1, of the same 11th Census, we see that in 1870 the per cent. of population in cities was 20.93%. In 1890 this per cent. had increased to 29.20%. Evidently, then,

a larger percentage of labor is seeking employment in factories and similar industries. This flood of laborers to the cities must, then, also tend to lower wages.

The significance of these various tables and facts may be summarized as follows: The silver advocate says that the rate of wages has been lowered or depressed by the appreciation of the gold dollar since 1873, and, certainly, all other circumstances remaining the same, an appreciation of gold would cause money wages to fall, since wages are measured in money value. But what influences have been at work to lower wages since 1873?

FIRST—There has been a flood of laborers from the farm to the city, tending to oversupply the demand.

SECOND—The per cent. of foreigners, who are cheap laborers, has increased dangerously in the last decade, and, moreover, these foreigners now come from the southern or Slav district, and are ignorant and degraded.

THIRD—The hours of labor have decreased 5% since 1873, which obviously would tend to reduce wages in an equal degree.

FOURTH—The decreased prices of the necessaries of life (as will be shown in Chapter IV) tend to lower wages.

But we see from the table on the Trend of Wages since 1840, that after the abnormal conditions of wages due to the war and the disturbance of 1873, that, beginning with 1880, the course of wages has been steadily upward, not-

CHART No. 3.

Graphic Variations in the World's Production of Gold from 1492 to 1896.

(In 100,000 Ounces.)

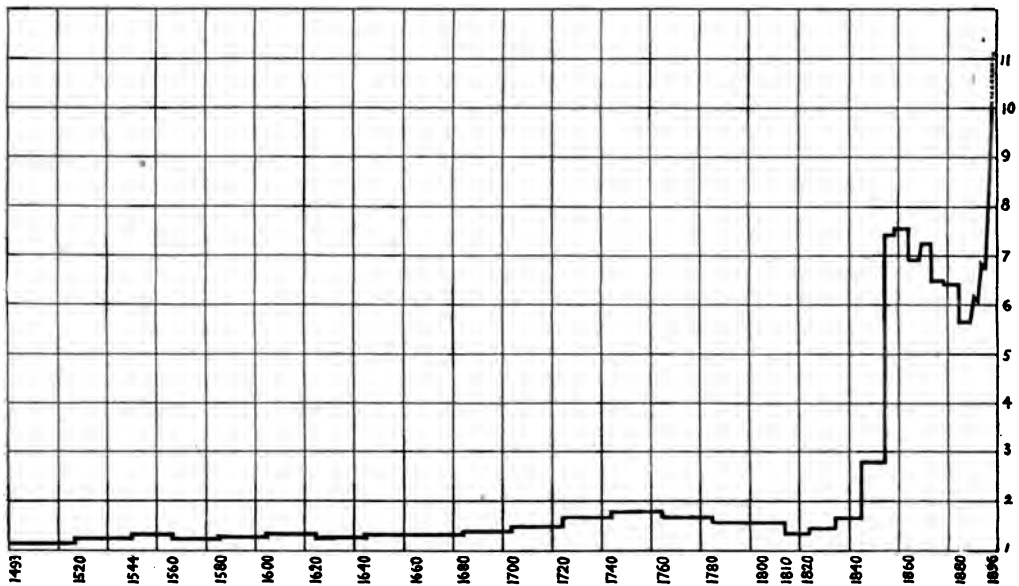


TABLE 31.

WORLD'S PRODUCTION OF GOLD SINCE THE DISCOVERY OF AMERICA.

(Taken from 1492-'85, Dr. Adolph Soetbeer. From '85-'96, U. S. Mint Reports.)

Periods.	Average ounces per year.	Total ounces for period.	Average value per year.	Total value for period.
1493-1520	186,470	5,221,160	$3,855,000	$107,931,000
1521-1544	230,194	5,524,656	4,759,000	114,205,000
1545-1560	273,596	4,377,544	5,656,000	90,492,000
1561-1580	219,906	4,398,120	4,546,000	90,917,000
1581-1600	237,267	4,745,340	4,905,000	98,095,000
1601-1620	273,918	5,478,360	5,662,000	113,248,000
1621-1640	266,845	5,336,900	5,516,000	110,324,000
1641-1660	281,955	5,639,110	5,828,000	116,571,000
1661-1680	297,709	5,954,180	6,154,000	123,084,000
1681-1700	346,095	6,921,595	7,154,000	143,088,000
1701-1720	412,163	8,243,260	8,520,000	170,403,000
1721-1740	613,422	12,268,440	12,681,000	253,611,000
1741-1760	791,211	15,824,230	16,356,000	327,116,000
1761-1780	665,666	13,313,315	13,761,000	275,211,000
1781-1800	571,948	11,438,970	11,823,000	236,464,000
1801-1810	571,563	5,715,627	11,815,000	118,152,000
1811-1820	367,957	3,679,568	7,606,000	76,063,000
1821-1830	457,044	4,570,444	9,448,000	94,479,000
1831-1840	652,291	6,522,913	13,484,000	134,841,000
1841-1850	1,760,502	17,605,018	36,393,000	363,928,000
1851-1855	6,410,324	32,051,621	132,513,000	662,566,000
1856-1860	6,486,262	32,431,312	134,083,000	670,415,000
1861-1865	5,949,582	29,747,913	122,989,000	614,944,000
1866-1870	6,270,086	31,350,430	129,614,000	648,071,000
1871-1875	5,591,014	27,955,068	115,577,000	577,883,000
1876-1880	5,543,110	27,715,550	114,586,000	572,931,000
1881-1885	4,794,755	23,973,773	99,116,000	495,582,000
1886	5,127,750	5,127,750	106,000,000	106,000,000
1887	5,116,865	5,116,865	105,775,000	105,775,000
1888	5,330,780	5,330,780	110,197,000	110,197,000
1889	5,973,780	5,973,780	123,489,000	123,489,000
1890	5,749,320	5,749,320	118,849,000	118,849,000
1891	6,320,195	6,320,195	130,650,000	130,650,000
1892	7,077,165	7,977,165	146,298,000	146,298,000
1893	7,605,904	7,605,904	157,228,000	157,228,000
1894	8,768,603	8,768,603	181,510,100	181,510,100
1895	9,806,767	9,806,767	203,000,000	203,000,000
Total		424,881,864		$8,783,611,100
*1896		10,628,019	220,000,000	220,000,000
Total to 1897		435,509,883		$9,003,611,100

* Estimate by Dr. Goetz, Expert Metallurgist.

It will be noticed that from 1492 to 1840 the output of gold was comparatively small and steady, and that there was a very rapid rise from

1840 to 1895, with the exception of a slight drop in the period from 1860 to 1885. This drop marks the exhaustion of the Placer or Surface mining in California and Australia, and the excitement caused by the discovery and the opening of silver mines in the Western part of the United States.

Of this period Edward Atkinson says: "Soon after 1870 came the great disturbance in the monetary systems of the world, which finally led to the legal tender legislation of 1872-73 in Germany and the United States, followed by the action of the Latin Union and India. The end of these changes was to establish gold as a unit of value among the great commercial nations. After 1870 there was a moderate falling off in the production of gold, and the change in the methods of its production began. From 1870 to 1890, inclusive (despite the decline in production from 1870-85) the amount of gold added to the world's stock was about $2,200,000,000, at the average rate of $110,000,000 a year."

Before the

DISCOVERY OF GOLD IN CALIFORNIA AND AUSTRALIA

had begun to affect the gold supply, the world's total production of gold had been a little over $800,000,000. This was added to the world's stock at the average rate of $16,000,000 a year. Then came the wild excitement, and the great supply from the Comstock Lode, and other events. In twenty years, from 1851 to 1870, inclusive, the addition to the world's stock of gold amounted to a fraction under $2,600,000,000, at the average rate of $130,000,000 a year.

It will be noticed that in the forty years, from 1850 to 1890, the world produced $4,806,702,000 of gold, an amount greater than the total output of gold in the entire world prior to 1850. While in the five years, from 1890 to 1896, there has been an average yearly production of $162,000,000, an amount greater than the entire output of both gold and silver in the twenty-one years, from 1850 to 1872, when California and Australia were yielding their greatest supplies.

TABLE 32.

PRODUCTION OF GOLD PER CAPITA IN THE WORLD, FROM 1804 TO 1894.

Year.	World's Population. Estimater.	Millions.	Production of gold.	Gold per capita.	Increase per capita, per cent.	Decrease per capita, per cent.
1804	Malte Brun..	640	$11,815,000	$0.018	...	...
1828	Balli.....	847	9,448,000	0.011	...	39
1845	Michelot.....	1,009	36,339,000	0.036	227	...
1874	BehmWagner	1,391	115,577,000	0.083	131	...
1883	BehmWagner	1,433	99,116,000	0.069	...	17
1893	World's Almanac, 1896	1,545	157,228,000	0.101	46.4	...

The foregoing table shows that there was a decrease in the per capita of gold produced in the world from 1804 to 1828, that from 1828 to 1874 there was an increase in the per capita production, that from 1874 to 1883, when the world was demonetizing and limiting the coinage of silver, that the production of gold decreased 17%, and then to 1893 there follows an increase of 46% in the production.

GOLD FIELDS.

EARLIEST, LATEST, AND FUTURE ONES.

The first gold fields of the world were located in Asia and Egypt. Although Africa early en-

tered the list of gold producing countries, and furnished most of the gold for the Christian era, yet until recent years her production has been very small. The mines of Asia Minor made but a slight contribution to the world's supply, the mines of Mount Tmolus and the gold sands of Pactolus were early exhausted. The mines of Arabia could not be worked owing to the great cost of production. Some gold was found in Afghanistan, Cochin China, and the Islands of the Indian Ocean furnished small quantities of gold. Borneo has long been celebrated for its abundance of gold from alluvial deposits. The beds of the rivers of Celebes and the Phillipine Islands produced a moderate amount. Gold was found in England and Wales a century before the Roman conquest. During James IV. and V's reigns, Scotland furnished a large amount, which was taken from the earth washed from the Grampian Hills.

Such, as we have hastily surveyed them, were the gold fields before the discovery of America. Nearly every country, either at an earlier or later date, had produced gold, yet before the discovery of America the supply of gold in the world was very insignificant, the combined stock of gold and silver as money being only about $154,900,000.

GOLD AFTER THE DISCOVERY OF AMERICA.

A GOLD ERA.

The greatly disturbed state of European society, and the invasion of Spain by Bonaparte,

produced such great uncertainty in business that capital was withdrawn from industry and the production of gold and silver declined. Like causes operating between 1811 and 1820, produced a decline in the production of precious metals in Chile, Peru, Colombia, and Buenos Ayres. The Brazilian production also began to decline. The war between England and the United States (1812 to 1815) gave an impetus to cotton raising and caused a still greater decline in the gold production. But in 1823 the Ural Mountains began to increase their output and the world's production of gold began to revive.

In the following period the existence of rich and vast deposits of gold were made known. Rich mines on the Pacific coast of the United States were found and were quickly followed by the Australian discoveries of 1851. These discoveries raised the annual production of gold from $13,500,000 in 1840 to $36,500,000 in 1855. The opening of these abundant fields was followed by the opening of the extensive mines of Africa, South America, and the Western United States. The discovery of gold has so advanced that to-day the prospecting for new fields is practically a thing of the past, the object now being to open and work new mines.

GOLD FIELDS OF TO-DAY.

The four great gold-producing regions of to-day are in South Africa, South America, Australia, Asia, and the Western United States. In Africa we have ten great fields as follows:

AFRICA'S GOLD FIELDS.

Witwaterstrand, De Kapp, Lydenburg, Lit-

tle Letaba, Klerksdort, Malmani, Marabastad, Houtboschberg, Vryheid, and Selati. The production of the principal one of these mines in the seven years from 1878 to 1895 is shown in the following table quoted from the report of the Berlin Silver Commission of 1894.

TABLE 33.

WITWATERSRAND TROUGH, AFRICA.

1888	230,640 oz.
1889	382,364 "
1890	492,492 "
1891	729,223 "
1892	1,210,574 "
1893	1,478,473 "
1894	149,814 "

This trough employs 3,200 whites and 21,000 colored men.

In 1892 there were in operation in this field sixty-nine mines with a total output of 1,795,630 tons of conglomerate. The production of this mine in the year 1895 was $42,000,000.

In the following table is given the total production of these four great gold-producing regions, together with the production of their several fields; also the production of the remaining world as divided into countries:

TABLE 34.

GOLD PRODUCTION BY COUNTRIES FROM 1891 TO 1894.

Countries.	1891.	1892.	1893.
United States	$33,175,000	$33,000,000	$35,955,000
Australasia	31,399,000	34,159,000	35,688,600
Mexico	1,000,000	1,129,200	1,305,300
European countries:			
Russia	24,162,500	24,806,200	26,454,400
Germany	1,567,800	2,087,600	1,498,900
Austria-Hungary	1,399,600	1,502,000	1,502,000
Sweden	73,100	58,500	62,000
Norway	.....	.....	.....
Italy	94,300	91,400	117,000
Spain	.....	.....	.....
Greece	.....	.....	.....

TABLE 34—Continued.

European Countries.	1891.	1892.	1893.
Turkey	7,000	7,000	7,000
France	135,900	129,700	129,700
Great Britain	67,000	51,200	42,300
Dominion of Canada	930,600	907,600	927,200
South American countries:			
Argentine Republic.	82,000	82,000	140,200
Colombia	3,472,000	3,472,000	2,892,800
Bolivia	67,000	67,000	67,000
Ecuador	52,000	52,000	52,000
Chile	1,436,600	1,436,600	1,436,600
Brazil	857,800	869,200	869,200
Venezuela	1,000,000	806,100	806,100
Guiana (British)	1,800,000	2,398,900	2,567,400
Guiana (Dutch)	542,000	713,800	713,800
Guiana (French)	998,200	998,200	998,200
Peru	73,000	73,000	73,000
Uruguay	141,600	141,600	141,600
Central Am. States	163,500	163,500	163,500
Japan	508,400	511,700	484,000
China	6,652,000	8,426,000	8,426,000
Africa	15,742,400	24,232,000	29,305,800
India (British)	2,495,000	3,318,300	3,813,600
Korea	554,700	606,300	587,900
Total	$130,650,000	$146,297,600	$157,228,100

IMPROVEMENTS IN METHODS OF GOLD PRODUCTION.

GREAT CHEMICAL AND MECHANICAL IMPROVEMENTS IN GOLD MINING.

The four principal causes for the enormous increase in the production of gold in the last decade are: (1) General economic fall in the cost of production and distribution. (2) Increased activity in prospecting for ore, due to favorable gold legislation and an active gold market. (3) Improved mechanical devices for mining—the introduction of the hydraulic process, steam shovel, crushers, sorters, and improved methods in smelting. (4) Improvements in the science of Metallurgy in the development of the chlorination and cyanide processes. These processes

have made profitable the working of ores which ten years ago could not be worked without loss. At that time only such ores were available as were rich, or such ores as could be easily amalgamated, namely, the so-called free-milling ores. Much ore, although containing from $10 to $40 of gold to the ton, was not exploited, for the reason that it could not be amalgamated or did not contain enough extractable gold to permit of heavy freight charges and smelting expenses. Now, with the use of the chlorination and cyanide processes, all such ores are available. In the chlorination process the ore is roasted to free it of sulphur, and then placed in large rotating cylinders in which it is treated with a solution of chlorine and water. The gold is precipitated out of this aqueous solution by the use of sulphurated hydrogen. The process costs from $3 to $5 a ton. The cyanide process is much cheaper and requires a plant of much smaller dimensions to operate it on a large scale. The cost of the treatment per ton of ore is about $2. Such low grade ores as contain nothing that will decompose the solution for continuous use, can be treated by cyanide. Finely divided free gold is readily extracted. The solution contains about 1 per cent. of cyanide of potash, which is a potent ingredient for extracting the gold.

To-day these processes are being used very extensively. About one-third of the gold produced in the Transvaal last year was extracted from the low-grade ore by the cyanide process. In the Meker district, in Utah, there are several cyanide mills extracting gold at a good profit from ore containing from but $6 to $10 worth to

the ton. Large quantities of ore carrying from $15 to $35 per on are treated by the chlorination process in the Black Hills. A large part of the Cripple Creek ores are not rich enough to pay the expenses of mining, transporting, and smelting, but by treating these low-grade ores and tailings near the camp by the chlorination and cyanide processes a good profit is realized. Having studied the production of gold in the past let us investigate the prospects for the

FUTURE PRODUCTION.

ESTIMATES OF FUTURE PRODUCTION VERY PROMISING.

As to the prospects of the continued increase of the gold production of the world, there is good reason to believe, in view of the large and new fields now being exploited, and the probability of our soon being able to work other extensive low-grade properties, that the present producion of gold will be maintained for sometime and probably still further increased. There is continual activity in metallurgical laboratories with the aim to still further simplify and cheapen the processes of production. The gold districts now being developed will, say experts, keep up a large production of ores for years. The opening up and the development of Central and South America, Central Africa, and of the vast territory of Siberia, by railroad enterprises, is sure to result in adding more fields available for the production of gold. The Siberian Railroad with its branches, will reach the region along the Ural Mountains and the Northern Himalayan

valley. These mountains and valleys have never been subjected to close scientific exploration. What they may add to the world's producion of gold cannot be definitely estimated. In the present condition of these regions the very search for gold is one of the most potent influences, and great enterprises are undertaken to make way for the commerce which ensues. If these enterprises and improvements continue, which there is no doubt they will, these regions will be gradually opened, and for at least the coming decade a stable production of gold is assured.

(See Chart No. 4, page 89.)

It will be noticed that from 1874 the amount of gold produced in the world per capita fell slightly, but with the late discoveries the per capita increases.

DEMAND FOR GOLD.

INCREASING DEMAND IN COINAGE AND ARTS.

The principal demands for the world's production of gold are: (1) World's coinage; (2) Manufacture and arts; (3) Hoarding; (4) Wearing away of coins.

TABLE 35.

WORLD'S COINAGE AND RECOINAGE OF GOLD FROM 1873-1893. COINAGE OF NEW GOLD ESTIMATED IN MILLIONS OF DOLLARS.

(Muhleman.)

Year.	Coinage.	Re-coinage.	Coinage of new gold.
1879.....	91	16	65
1880.....	116	46	71
1881.....	147	34	114
1882.....	100	7	93
1883.....	105	29	76
1884.....	99	12	88

CHART No. 4.

CHART SHOWING THE VARIATIONS IN THE PER CAPITA GOLD PRODUCTION IN THE WORLD FROM 1804–1893.

(In Cents Per Capita.)

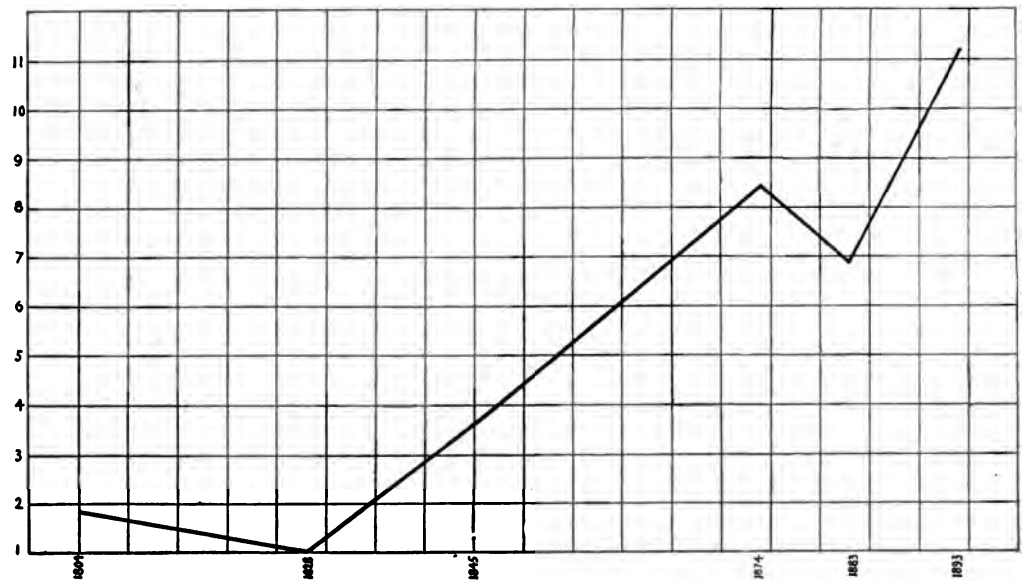


TABLE 35—Continued.

Year.	Coinage.	Re-coinage.	Coinage of new gold.
1885	96	14	82
1886	95	12	83
1887	125	49	76
1888	138	33	105
1889	169	19	150
1890	149	34	115
1891	167	28	139
1892	168	83	85
1893	232	34	198

The world's coinage of gold, minus the world's re-coinage of gold, gives the world's coinage of new gold, or the amount of the yearly product of gold used for the purposes of coinage. The line on Chart No. 5 shows the variation in the amount of gold used for coinage in the world. It will be noticed that the demand for gold in coinage increases from 1879, and greatly increases from 1892. The following table shows the amount of coined and uncoined gold in the world at different periods.

(See Chart No. 5, page 91.)

TABLE 36.

TOTAL OF GOLD COINED AND UNCOINED IN THE WORLD IN TONS.

(Approximate value per ton $640,000 avoirdupois.)

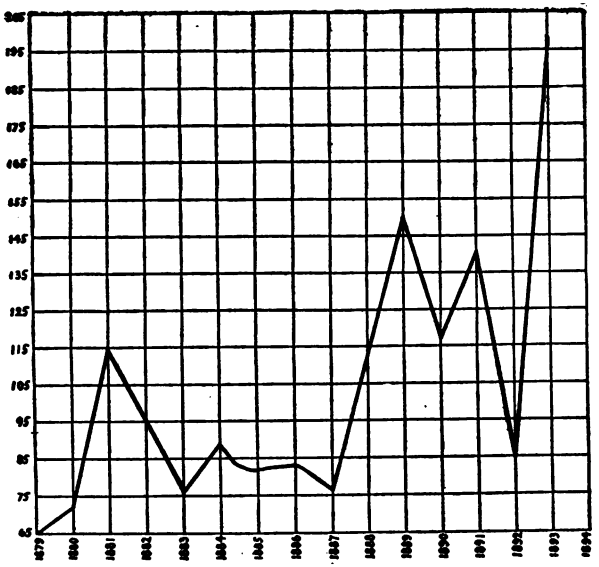
Years.	Coined.	Uncoined.	Total in World.	Ratio of Coined to Uncoined.	Per Cent. of Total Gold in the World Coined.
1600	208	622	803	1—3	25
1700	537	773	1,310	1—½	30
1800	908	1,822	2,730	1—2	33⅓
1848	1,125	2,550	3,575	1—2¼	33⅓
1880	5,250	2,550	7,800	1—½	67
1890	5,640	3,180	8,820	1—¾	64

The foregoing table shows that in 1800 the amount of gold used in the arts was double that used in coinage, and that in 1848 the amount used in the arts was two and one-fourth times

CHART No. 5.

VARIATIONS IN WORLD'S COINAGE OF NEW GOLD.

(Compiled from Table 85.)



the amount used in coinage. But in 1880 the amount used in the arts was only one-half as much as the amount used in coinage. Again, in 1890, we notice that there was three-fourths as much gold used in the arts as in coinage. Hence this is significant, as showing that notwithstanding the increased demand for gold in coinage, about 1873, the proportion of gold used in the arts as compared with the amount used in coinage had increased from one-half to three-fourths. This shows that the increased demand for gold in coinage was not equal to the increased demand in the arts. Therefore it is reasonable to suppose, that the increased demand of gold for coinage from 1873 on, could not have appreciated the value of gold. But if there was any appreciation in the value of gold, it was due, not to coinage, but to the increased demand in the arts.

TABLE 37.

ESTIMATED USE OF GOLD IN THE ARTS.

(In millions of dollars. Excluding old material.)

Countries.	Average from 1871-1880.	1885.
United States.....	9.0	13.0
Great Britain.....	11.3	11.20
France.....	11.2	11.10
Germany.....	7.8	8.00
Switzerland.....	7.5	6.60
Holland and Belgium	....	1.90
Austria-Hungary....	1.6	1.60
Italy.....	3.0	3.00
Russia.....	1.6	1.60
Others.....	2.6	1.30
Total.....	55.6	59.30

It will be noticed from these tables that from 1871 to 1880 the average demand for gold in the arts was about $55,600,000, and that despite the decrease of $15,000,000 in the world's production of gold from 1880 to 1885, as shown in

Table 31, the amount of gold used in the arts increased about $4,000,000. Thus we see that the demand for gold in the world's coinage was not great enough to decrease its use in the arts. This seems to refute the idea that there is, and has been an insufficient quantity of gold in the world for coinage purposes.

MANUFACTURING AND ARTS.

AN IMPORTANT AND CONTINUOUS DEMAND A STEADIFIER OF VALUE.

It is difficult to get accurate and late statistics concerning the consumption of gold in the arts. There are no competent returns available. Dr. Adolph Soetbeer gives the following estimates:

TABLE 38.

WORLD'S DEMAND FOR GOLD

From 1831 to 1880. Soetbeer quoted by Mulhall.

(In tons; approximate value $480,000 per ton.)

Periods.	Coinage.	Manufacture.	East.	Total.
1831-'40	50	180	10	240
1841-'50	350	200	28	578
1851-'60	1,633	280	100	2,013
1861-'70	1,008	570	300	1,878
1871-'80	849	480	120	1,809
Total for 50 years...	3,890	2,070	558	6,518

Of this total production about 58% is coined, 35% used in manufacturies and arts, and 7% is exported to the Eastern world. The total production and consumption for the same period of 50 years, from 1831 to 1881, was as follows:

	Tons.
Production	6,358
Consumption	6,518
Deficit	160

The deficit is accounted for by the fact that a great deal of the coinage was re-coinage of old money, and is therefore counted twice.

In 1888 Spallart estimated the consumption of gold in the arts as follows:

TABLE 39.

CONSUMPTION OF GOLD IN THE ARTS.

Countries.	Consumption per 1,000 population.	Value approximately $20 per oz.
United States.....	12 oz.	$248
Great Britain.....	16 "	320
France.....	15 "	300
Germany.....	9 "	180
Switzerland.....	125 "	2,500
Austria.....	2 "	40
Italy.....	5 "	100
Russia.....	1 "	20
Holland & Belgium	10 "	200
Average.....	21 9-10	$434

(See also Table 40, on U. S. Consumption, on opposite page).

HOARDING OF GOLD.

GREATLY INCREASED IN TIMES OF FINANCIAL UNCERTAINTY.

The next great use for gold is found in hoarding. It is used as a store of value by many people, because they realize that it will always be valuable and can be sold in any form. It has been estimated by O'Conner, who is quoted by Mulhall, that from 1860 to 1890 India consumed $508,400,000 worth of gold for hoarding purposes. This amount of gold was drawn from the world's supply. In the preceding twenty-five years India took $168,000,000, making a total of $616,400,000 of gold in fifty-

TABLE 40.

GOLD USED IN THE UNITED STATES IN ARTS AND MANUFACTURES, AND THE PROPORTION OF ANNUAL PRODUCTION TO AMOUNT USED.

Calendar year	United States coin.	Foreign bullion and coin.	(Mint Report, 1894.) Old material.	New material.	Total.	Production.	Ratio of U. S. gold used in U. S. arts to U.S. production.
1880.....	$3,300,000	$1,267,600	$395,000	$6,000,000	$10,962,600	36,000,000	1—6
1881.....	2,700,000	1,547,800	522,900	7,000,000	11,770,700	34,700,000	1—5
1882.....	2,500,000	671,500	696,500	7,000,000	10,868,000	32,500,000	1—4
1883.....	4,875,000	194,500	1,549,300	7,840,000	14,458,800	30,000,000	1—4
1884.....	5,000,000	385,500	3,114,500	6,000,000	14,500,000	30,800,000	1—5
1885.....	3,500,000	178,913	1,408,902	6,736,927	11,824,742	31,800,000	1—5
1886.....	3,500,000	633,003	1,928,046	7,003,480	13,069,529	35,000,000	1—5
1887.....	3,500,000	384,122	1,835,882	9,090,342	14,810,346	33,000,000	1—3
1888.....	3,500,000	718,809	2,402,976	9,893,057	16,514,842	33,175,000	1—3
1889.....	3,500,000	291,258	3,218,971	9,686,827	16,697,056	32,800,000	1—3
1890.....	3,500,000	362,062	3,076,426	10,717,472	17,655,960	32,845,000	1—3
1891.....	3,500,000	628,525	4,860,712	10,697,679	19,686,916	33,175,000	1—3
1892.....	3,500,000	771,686	4,468,685	10,588,703	19,329,074	33,000,000	1—3
1893.....	1,500,000	804,254	2,777,165	8,354,482	13,435,901	35,955,000	1—4
1894.....	.....	.....	.....	.....	6,050,852	20,000,000	....
1895.....	.....	.....	.....	.....	.....	39,500,000	....
Totals..	$47,875,000	$8,844,532	$32,255,965	$116,608,969	$211,635,318		

We will notice a decrease of 53 per cent. in the amount of gold used in the arts in 1893 over 1892.

In the column on ratios of production in arts we will see that the arts required 1 ounce of gold annually for every 6 ounces produced, but to-day they require 1 ounce of every 4 ounces produced.

five years. This money is held in that country as hoards.

INDIAN DEMAND.

In the 280 years ending 1830 it is estimated that India alone absorbed $1,760,000,000 of the precious metals. The following table gives the gold exported to India from 1850 to 1886:

TABLE 41.

GOLD EXPORTED TO INDIA.

1850-'59	$56,000,000
1860-'69	236,000,000
1870-'79	72,000,000
1880-'86	112,000,000
Total	$476,000,000

By a summary of the demand for gold we see that the amount used in coinage and in arts varies from time to time. The following chart shows the variation in the ratio between the amount of gold used in the arts and in coinage from 1600. These figures are compiled by Mulhall, the best authority attainable.

(See Chart No. 6, page 97.)

From this chart we see that the demand for gold in the arts and coinage varies greatly from time to time. We will notice that the change of the monetary standard about 1873 did not cause a very great variation in the ratio. To-day we notice that the amount of gold used in the arts, compared with the amount used in coinage, is on the rise.

SUPPLY AND DEMAND OF SILVER.

SILVER PRODUCTION.

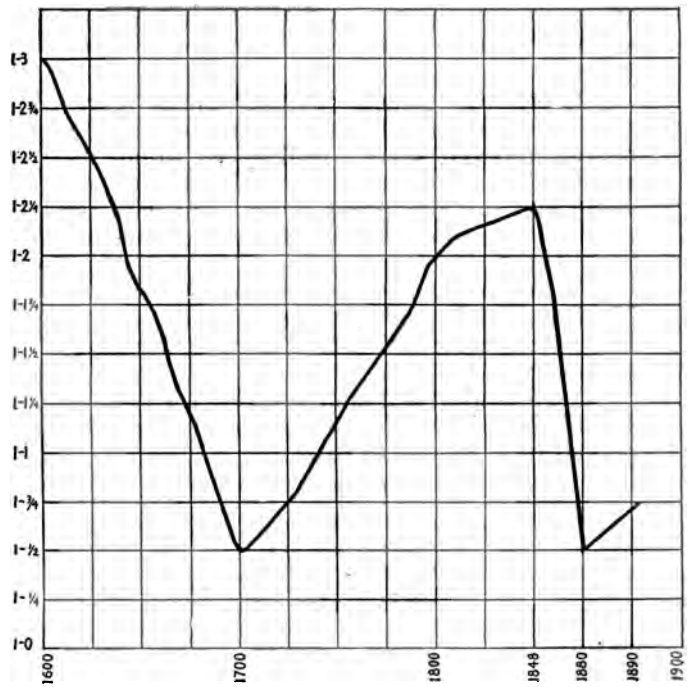
EARLIEST, LATEST AND FUTURE FIELDS.

Previous to the discovery of America most

CHART No. 6.

VARIATIONS IN THE RATIO BETWEEN COINED AND UNCOINED GOLD IN THE WORLD.

Ratio. (Figured from Mulhall's Tables.)



of the silver produced in the world was obtained from China, Central Asia, and Eastern Europe. But with the discovery of the Western Continent North and South America became very prominent in the field of Silver Production. Mexico was the first great silver producing country of the Western world. The finding of silver in Mexico was soon followed by the opening of mines in South America and the Western United States.

Up to the present writing nearly every country of the world has at an earlier or later period produced silver. And up to within the last three years nearly every country of the world was still producing silver. But with the decline in the price of silver many of these mines have shut down.

To-day the great silver fields are Australasia, Mexico, Bolivia, and the West Central part of the United States. (Nevada, Colorado, Montana, Utah, etc.)

The following is a table showing the production of silver from 1492 to 1896, as averaged for periods of 5, 10 and 20 years.

TABLE 42.

WORLD'S PRODUCTION OF SILVER FROM 1492-1896.

(Mint Report, '94.)

Periods.	Average oz. per yr.	Total oz. per period.	Average value per yr.	Total value per period.
			In $1,000.	In $1,000.
1493-1520.....	1,511,050	42,309,400	$1,954	$54,703
1521-1544.....	2,899,930	69,598,320	3,749	89,986
1545-1560.....	10,017,940	160,287,040	12,952	207,240
1561-1580.....	9,628,925	192,578,500	12,450	248,990
1581-1600.....	13,467,635	269,352,700	17,413	348,254
1601-1620.....	13,596,235	271,924,700	17,579	351,579
1621-1640.....	12,654,240	253,084,800	16,361	327,221
1641-1660.....	11,776,545	235,530,900	15,226	304,525

TABLE 42—Continued.

Periods.	Average oz. per yr.	Total oz. per period.	Average value per yr. In $1,000.	Total value per period. In $1,000.
1661-1680.....	10,834,550	216,691,000	14,008	280,166
1681-1700.....	10,992,085	219,841,700	14,212	284,240
1701-1720.....	11,432,540	228,650,800	14,781	295,629
1721-1740.....	13,863,080	277,261,600	17,924	358,480
1741-1760.....	17,140,612	342,812,235	22,162	443,232
1761-1780.....	20,985,591	419,711,820	27,133	542,658
1781-1800.....	28,261,779	565,235,580	36,540	730,810
1801-1810.....	28,746,922	287,469,225	37,168	371,677
1811-1820.....	17,385,755	173,857,555	22,479	224,786
1821-1830.....	14,807,004	148,070,040	19,144	191,444
1831-1840.....	19,175,867	191,758,675	24,793	247,930
1841-1850.....	25,090,342	250,903,422	32,440	324,400
1851-1855.....	28,488,597	142,442,986	36,824	184,169
1856-1860.....	29,095,428	145,477,142	37,618	188,092
1861-1865.....	35,401,972	177,009,862	45,772	228,861
1866-1870.....	43,051,583	215,257,914	55,663	278,313
1871-1875.....	63,317,014	316,585,069	81,864	409,322
1876-1880.....	78,775,602	393,878,009	101,851	509,256
1881-1885.....	92,003,944	460,019,722	118,955	594,773
1886.....	93,276,000	93,276,000	120,600	120,600
1887.....	96,124,000	96,124,000	124,281	124,281
1888.....	108,827,000	108,827,000	140,706	140,706
1889.....	120,214,000	120,214,000	155,428	155,428
1890.....	126,095,000	126,095,000	163,032	163,032
1891.....	137,171,000	137,171,000	177,352	177,352
1892.....	152,940,000	152,940,000	197,741	197,741
1893.....	161,776,000	161,776,000	209,165	209,165
1894.....	167,752,561	167,752,561	211,000	211,000
1895.....	.....	.....	.....	220,000
		7,821,775,277		$10,430,041

The following chart shows the variations in the world's production of silver.

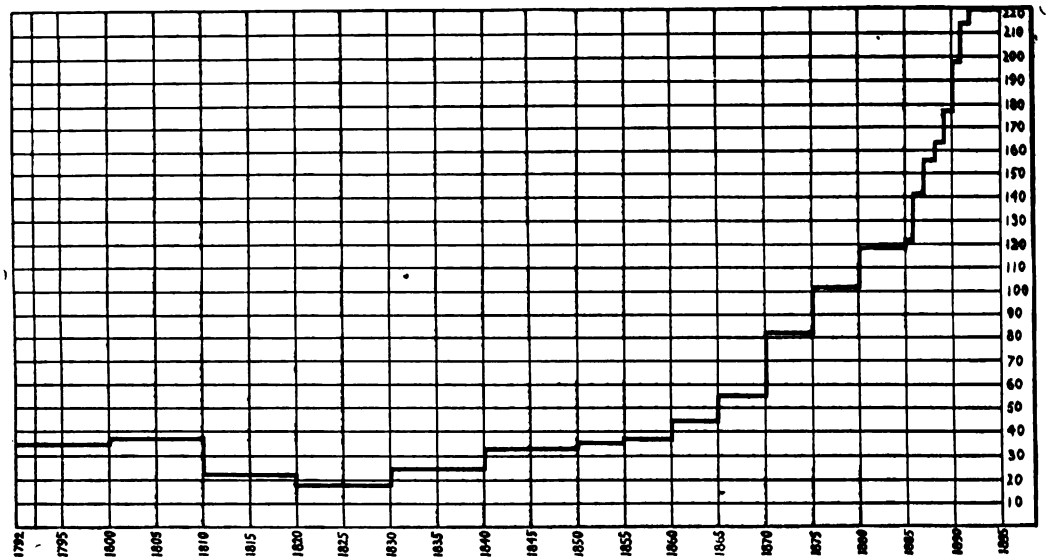
(See Chart No. 7, page 100.)

This graphic chart is compiled from figures taken for averages of periods in the same manner as the foregoing table. We see by the foregoing chart that there was a great drop in the production of silver in 1808, and that it did not revive until 1842. It will also be noticed (Chart No. 3) that the production of gold also declined during this period. But after this date it increased much faster than silver. From 1842 to 1896 we see a

CHART No. 7.

VARIATIONS IN THE PRODUCTION OF SILVER IN THE WORLD FROM 1792 TO 1896.

(Compiled from Mint Report 1894.)



steady and rapid increase in the production of silver. It appears that the unfavorable monetary legislation in these latter years has had no material effect in decreasing the rate of production of silver. In these latter years the production of silver still increased until the year 1895.

The following table shows the location of the great silver producing districts of the world, and their relative importance. These few dates will give an idea of the relative importance of these countries to silver production:

TABLE 43.

WORLD'S PRODUCTION OF SILVER BY COUNTRIES.

(U. S. Mint Report 1894.)

	1891.	1892.	1893.
United States	$75,416,500	$82,101,000	$77,575,700
Australasia	12,929,300	17,375,700	26,507,000
Mexico	45,066,200	51,077,000	57,357,600
European Countries:			
Russia	576,200	601,700	420,500
Germany	7,756,600	8,815,600	8,240,100
Austria-Hungary	2,161,900	2,289,200	2,289,200
Sweden	152,000	2,200	186,800
Norway	235,400	186,800	186,800
Italy	1,542,800	1,656,300	1,200,500
Spain	1,923,400	1,923,400	2,603,000
Greece	84,200	84,200	84,200
Turkey	263,200	263,200	263,200
France	3,667,000	3,852,600	3,852,600
Great Britain	255,600	219,000	327,700
Dominion of Canada	406,200	446,700	321,400
South American Countries:			
Argentine Republic	620,000	620,000	915,400
Colombia	1,698,600	1,698,600	2,182,400
Bolivia	15,488,000	15,488,000	15,488,000
Ecuador	10,000	10,000	10,000
Chile	1,401,200	2,281,600	2,281,600
Brazil	.....	.....	.....
Venezuela	.....	.....	.....
Guiana (British)	.....	.....	.....
Guiana	.....	.....	.....
Guiana (French)	.....	.....	.....
Peru	2,910,200	2,462,700	2,462,700
Uruguay	.....	.....	.....
Central American States	2,000,000	2,000,000	2,000,000
Japan	1,798,800	2,285,200	2,409,600
China	.....	.....	.....
Africa	.....	.....	.....
India, British	.....	.....	.....
Korea	.....	.....	.....
	$177,352,300	$197,740,700	$209,165,000

TABLE 44.

PRODUCTION OF SILVER PER CAPITA IN THE WORLD FROM 1804-1894.

Year.	World's Population. Estimater.	Million.	Production of silver.	Silver per capita.	Increase per cent. per capita.	Decrease per cent. per capita.
1804	Malti Brun..	640	$37,168,000	$0.058	...	...
1828	Balti.....	847	19,144,000	0.022	...	62
1845	Michelot.....	1,009	32,440,000	0.032	45	...
1874	Behn Wagner	1,391	81,864,000	0.058	81	...
1883	Behn Wagner	1,433	118,195,000	0.131	123	...
1893	World's Almanac, 1896	1,545	209,165,000	0.136	3.8	...

It will be noticed from this table that the production of silver per capita since 1828 has constantly increased despite the fall in its value. Now, if the demand for silver has not increased per capita, there is an evident oversupply produced in the world annually. It will be noticed from Chart No. 4 that gold to-day is also increasing per capita.

The following is a graphic line showing the variations in the production of silver per capita for the same period: (See Chart No. 8, page 103.)

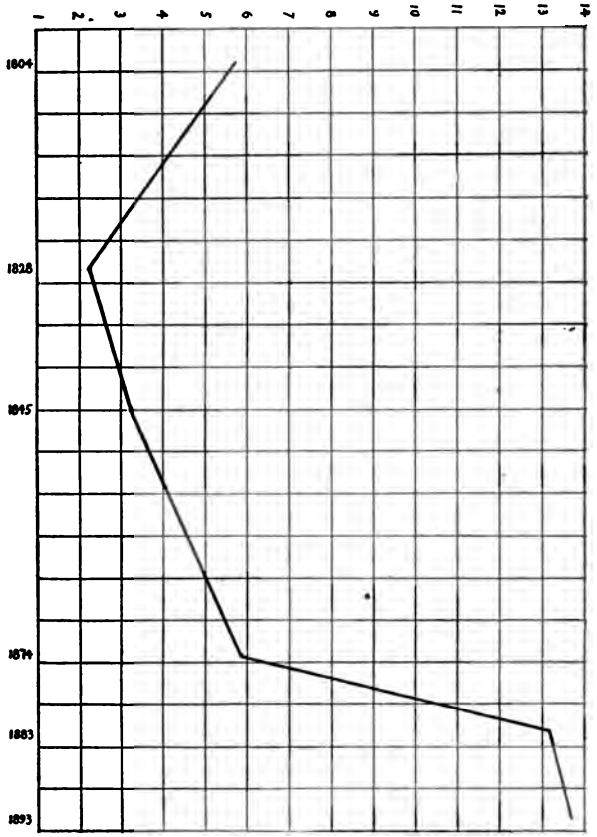
By comparing the graph of the per capita production of silver and gold we find that they both decline from 1804 to 1828, when they both start on the rise again, but it should be noticed that gold rises much more rapidly than silver until 1874, when silver goes up and gold down. The great increase of silver per capita after its demonetization in 1873 should also be noticed.

Thus we see that the world's production of silver goes on increasing despite the great fall in its value. This indicates that the cost of production of silver has also fallen.

CHART No. 8.

GRAPH SHOWING THE VARIATIONS IN THE PER CAPITA OF SILVER PRODUCTION IN THE WORLD FROM 1804 TO 1893.

(In Cents per Capita.)



FUTURE OF SILVER.

AN UNLIMITED SUPPLY. HOW IT WOULD BE AFFECTED BY AN INCREASED DEMAND.

There is no doubt that, should a demand be made for silver, it could be produced in almost unlimited quantities. Any person familiar with the silver mining of the Western United States can testify to the fact that there are thousands of tons of silver blocked out, that is, which is ready to be made into bullion at any time when the market demands it.

COST OF PRODUCTION GREATLY LOWERED.

The reason for the great increasing production of silver in these latter years is the cheapening in the cost of mining. Much of the silver produced to-day can be produced at a very low nominal price. This is shown by the fact that the production goes on at the present low bullion price of silver. (See Table 67, on bullion price.) In many places it is found with copper and the copper pays for the cost of mining and working the white metal.

In the discussion of the future of silver in the United States, we must not overlook the future of the metal in Mexico and other countries. The condition of the Mexican mines is about the same as our own. Those which can afford to produce silver at the market price to-day, are doing so, while those which cannot produce so cheaply have closed down.

THE EFFECT OF A DEMAND UPON THE FUTURE PRODUCTION OF SILVER.

It is very safe to say that the end of silver

production is as yet very distant. We cannot predict the amount which could be produced. It cannot be definitely stated how much of the white metal is stored away in the bowels of the earth. But we can say that there is no difficulty in finding more silver to-day than the world can possibly use, at the present demand, by the arts and coinage. To make a demand for it at a high price in coinage is useless, as it would only serve to stimulate and increase its production now, as it has always done subsequent to favorable silver legislation. We should notice that the act of 1878 did not affect the ratio between gold and silver in the least, although it produced a market for $2,000,000 worth of silver bullion per month. We should also notice that the effect of the Sherman Bill of 1890, which provided for the purchase of 4,500,000 ounces every month, was to but temporarily raise the price of silver.

According to the Berlin Silver Commission the purchases provided for in the Sherman bill (4,500,000 ounces per month) should have been sufficient to have maintained the raised ratio had the supply remained the same. But the effect of the bill was to so stimulate the production of all silver mines, and to so flood the market as to cause a sudden and rapid decline in the ratio. This is verified by noticing the charts and tables on the world's production of silver.

DEMAND FOR SILVER.

INCREASES IN COINAGE.

The principal demands for silver are: (1) coinage; (2) manufactures and arts; (3) wearing away of coins.

TABLE 45.

WORLD'S COINAGE OF SILVER 1879 TO 1894, IN MILLIONS OF DOLLARS.

Years.	(Muhleman.) Coinage.	Recoinage.	New Silver Used in Coinage.
1879.....	105	8.	97.
1880.....	85	9.5	83.5
1881.....	108	8.5	99.5
1882.....	111	8.5	102.5
1883.....	109	8.5	101.5
1884.....	96	8.5	83.5
1885.....	127	12.	115.
1886.....	121	15.5	105.
1887.....	163	19.25	83.7
1888.....	135	11.5	124.5
1889.....	139	37.25	111.75
1890.....	151	13.	138.
1891.....	138	15.25	123.75
1892.....	155	21.	134.
1893.....	135	....	....

The following is a chart showing the variations in the amount of new silver used in the world's coinage. (See Chart No. 9, page 107.)

The amount of new silver used is determined by subtracting the re-coinage from the coinage. It should be noticed that the amount of new silver demanded for coinage since 1879 has constantly increased; it having increased 70% since 1879, and we will remember that the silver production had increased 100% in the same period.

The following table shows the world's coined and uncoined silver in tons for the several periods:

TABLE 46.

WORLD'S COINED AND UNCOINED SILVER.

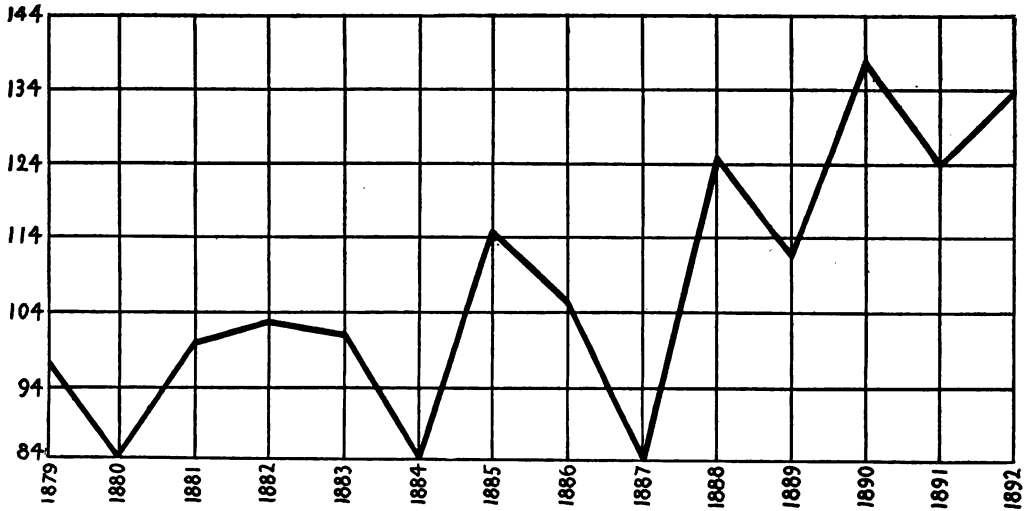
(In tons.)

Year.	Coined.	Uncoined.	Total.	Ratio between coined and uncoined.	Per cent of total silver in world coined,
1600.....	8,500	14,500	23,000	1—1⅛	37
1700.....	22,700	22,500	45,000	1—1	37
1800.....	42,000	46,000	88,000	1—1 2-8	50
1848.....	45,200	67,800	113,000	1—1 4-8	48
1885.....	73,700	71,300	145,000	1— ⅞	41
1890.....	88,100	76,900	165,000	1— 6-8	53

CHART No. 9.

GRAPH SHOWING VARIATIONS IN AMOUNT OF NEW SILVER USED IN THE WORLD'S COINAGE SINCE 1879.

(In Millions of Dollars.)



It should be noticed that the per cent. of the total amount of silver in the world used in coinage has constantly risen since 1600. Despite the demonitization of silver there is an increased per cent. of the total silver in the world used in coinage.

MANUFACTURE AND ARTS.

The world's demand for silver has been summed up by Soetbeer as follows:

TABLE 47.

WORLD'S DEMAND FOR SILVER.

Soetbeer from Mulhall.

(In Tons.)

Periods.	Coinage.	Manufacture.	Eastern Exports.	Total.
1831-40.....	2,700	2,000	2,200	6,900
1841-50.....	4,800	2,200	2,400	9,400
1851-60.....	....	2,700	11,300	14,000
1861-70.....	....	3,100	12,300	15,400
1871-80.....	1,200	4,500	10,800	16,500
Total for 50 years.....	8,700	14,500	39,000	62,200

TABLE 48.

ESTIMATED USE OF SILVER IN ARTS.

Soetbeer from Muhleman.

(In millions of dollars. Excluding old silver.)

Countries.	Average 1871-1880.	1885.
United States	4.2	4.8
Great Britain	2.9	2.9
France	3.1	3.1
Germany	3.1	3.4
Switzerland	1.0	1.0
Holland and Belgium.....	...	1.0
Austria-Hungary	1.3	1.3
Italy	0.8	0.8
Russia	1.3	1.3
Others	1.7	1.7
Total.....	19.4	21.3

The great demand for silver in the Orient should be noticed, so that when this demand de-

creases the effect upon the world's silver price will be appreciated. This will become important when we come to consider the effect of imports of silver to the East on the ratio between gold and silver, during the Latin Union.

In round numbers the same amounts are given as follows:

TABLE 49.

WORLD'S PRODUCTION AND CONSUMPTION OF SILVER FROM 1831 TO 1880.

(In Tons.)

Production	57,273
Consumption	62,300
Deficit	4,927

This deficit is undoubtedly made up by the world's re-coinage of silver.

In 1886 Spallart estimated the annual consumption of silver in the arts to be as follows:

TABLE 50.

Countries.	Per 1,000 population.	Value of ounce approximately $1, 1886.
United States	70 oz.	$70
Great Britain	66 "	66
France	65 "	65
Germany	60 "	60
Switzerland	285 "	285
Austria	28 "	28
Italy	22 "	22
Russia	12 "	12

It should be noticed that Switzerland demands more silver and also more gold per capita than any other country in the world.

TABLE 51.

Silver Used in Arts in United States.

(Mint Report, 1894.)

Calendar year.	United States coin.	Old material.	Foreign bullion and coin.	New material.	Total.	Annual production in U. S.	Ratio of U. S. silver. in U. S. arts to U. S. production.
1880.....	$600,000	$145,000	$353,000	$5,000,000	$6,098,000	$39,200,000	1—8
1881.....	200,000	178,000	371,000	5,900,000	6,649,000	43,000,000	1—8
1882.....	200,000	212,900	440,300	6,344,300	7,197,500	46,800,000	1—7
1883.....	200,000	561,900	155,000	4,623,700	5,540,600	46,200,000	1—11.5
1884.....	200,000	170,000	650,000	4,500,000	5,520,000	48,800,000	1—12
1885.....	200,000	462,186	62,708	4,539,875	5,264,769	51,600,000	1—13
1886.....	200,000	404,155	825,615	3,626,195	5,055,965	51,000,000	1—17
1887.....	200,000	480,606	654,991	4,102,734	5,438,331	53,350,000	1—13
1888.....	200,000	652,047	771,985	6,477,857	8,101,889	59,195,000	1—9
1889.....	200,000	611,015	657,997	7,297,933	8,766,945	64,646,000	1—9
1890.....	200,000	640,100	1,245,419	7,143,635	9,229,154	70,464,000	1—10
1891.....	200,000	858,126	1,256,101	7,289,073	9,603,300	75,417,000	1—10.5
1892.....	200,000	647,377	1,249,801	7,204,210	9,301,388	82,101,000	1—11.5
1893.....	100,000	1,222,836	1,740,704	6,570,737	9,634,277	77,576,000	1—12.5
Totals...	$3,100,000	$7,246,248	$10,434,621	$80,620,249	$101,401,118		

The change in the ratio of the annual production of silver in the United States and the annual amount of new silver used in the arts should be noticed. We see that in 1880 for every ounce of silver used in the arts there were only 8 ounces produced, while in 1893 for every ounce used in th arts there were 12½ ounces produced. This shows that the annual producion of silver has greatly increased, as compared with the demand for new silver in the arts.

HOARDING.

DEMAND DECREASING.

Hoarding forms a very important demand for silver and has a very great influence over the world's ratio between gold and silver. The majority of the silver sent to the East is used for hoarding.

TABLE 52.

EXPORTS OF SILVER TO THE EAST.

(From 1850 to 1880, by periods, taken from Mulhall. From 1881 to 1895, U. S. Director of Mint.)

	India.	China.	Straits.	Total.
1850-1859.....	$252,720,000	.....	.....	.....
1860-1869.....	490,860,000	.....	.....	.....
1870-1880.....	243,000,000	.....	.....	.....
1881.....	12,375,612	$3,898,860	$3,577,729	$19,852,201
1882.....	18,604,945	1,584,318	7,354,255	27,543,518
1883.....	18,040,140	4,212,574	11,189,631	33,442,345
1884.....	26,073,909	5,018,714	8,136,097	39,228,720
1885.....	30,913,667	3,160,315	3,108,146	37,182,128
1886.....	21,159,591	1,769,425	2,892,064	25,821,080
1887.....	19,798,328	1,427,179	2,766,946	23,992,453
1888.....	21,162,116	1,153,002	3,219,321	25,534,439
1889.....	28,392,786	2,731,861	8,181,141	39,305,788
1890.....	35,673,177	1,284,498	4,441,197	41,398,872
1891.....	21,717,992	1,177,620	10,754,800	33,650,412
1892.....	35,180,897	719,668	18,622,825	54,523,390
1893.....	34,319,877	11,635,650	7,847,295	53,802,822
1894, first nine months.....	20,701,190	11,937,267	5,594,752	38,233,209

It will be seen from this table that in the last few years the East has not demanded an increasing amount of silver.

The following is a line showing the variations of imports of gold and silver into India.

(See Chart No. 10, page 113.)

GOLD AND SILVER IMPORTS INTO INDIA.

The relation between the ratio of gold and silver and the imports of silver to India should be noted. When the imports fell after 1865 the ratio fell also, and after that year any change in the amount of imports to India was followed by a like change in the world's ratio of gold and silver.

It is very likely that the demands for silver in India will continue to decrease, as the English government demonetized silver in India in 1893. India already has enough silver in her own land to supply her needs for years to come. This takes away a very vital and important demand for the world's silver. It decreases the size of the silver market, and therefore the production of silver must decrease in like proportion, or the price of the white metal must naturally fall.

WEARING AWAY OF COINS.

As to the wearing away of coins of silver, it is about the same as that of gold. It is but a minor use and waste of silver.

SUMMARY.

In the summary of this chapter we will give several tables and charts, including among others a table showing the production of silver in the United States, and another showing the ratio of gold to silver from 1867.

CHART No. 10.

SURPLUS OF IMPORTS OVER EXPORTS OF GOLD AND SILVER INTO BRITISH INDIA, 1855 TO 1882.

(Laughlin's History of Bimetallism.)

---------- Commercial Ratio. ▬▬▬ Indias Imports of Silver.
═══ Imports of Gold.

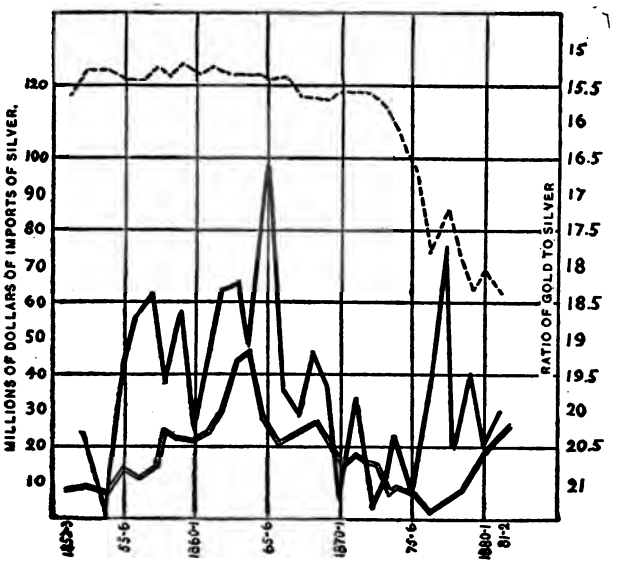


TABLE 53.

GOLD AND SILVER PRODUCTION IN U. S., 1792-1896.

(The estimate for 1792-1873 is by R. W. Raymond, Commissioner, and since by the Director of the Mint.)

Years.	Gold.	Silver.	Total.
April 2, 1792—July 31, 1834	$14,000,000	Insignificant.	$14,000,000
July 31, 1834—Dec. 31, 1844	7,500,000	$250,000	7,750,000
1845	1,008,327	50,000	1,058,327
1846	1,139,357	50,000	1,189,357
1847	889,085	50,000	939,085
1848	10,000,000	50,000	10,050,000
1849	40,000,000	50,000	40,050,000
1850	50,000,000	50,000	50,050,000
1851	55,000,000	50,000	55,050,000
1852	60,000,000	50,000	60,050,000
1853	65,000,000	50,000	65,050,000
1854	60,000,000	50,000	60,050,000
1855	55,000,000	50,000	55,050,000
1856	55,000,000	50,000	55,050,000
1857	55,000,000	50,000	55,050,000
1858	50,000,000	500,000	50,500,000
1859	50,000,000	100,000	50,100,000
1860	46,000,000	150,000	46,150,000
1861	43,000,000	2,000,000	45,000,000
1862	39,200,000	4,500,000	43,700,000
1863	40,000,000	8,500,000	48,500,000
1864	46,100,000	11,000,000	57,100,000
1865	53,225,000	11,250,000	64,475,000
1866	53,500,000	10,000,000	63,500,000
1867	51,725,000	13,500,000	65,225,000
1868	48,000,000	12,000,000	60,000,000
1869	49,500,000	12,000,000	61,500,000
1870	50,000,000	16,000,000	66,000,000
1871	43,500,000	23,000,000	66,500,000
1872	36,000,000	28,750,000	64,750,000
1873	36,000,000	35,750,000	71,750,000
1874	33,500,000	37,300,000	70,800,000
1875	33,400,000	31,700,000	65,100,000
1876	39,900,000	38,800,000	78,700,000
1877	46,900,000	39,800,000	86,700,000
1878	51,200,000	45,200,000	96,400,000
1879	38,900,000	40,800,000	79,700,000
1880	36,000,000	39,200,000	75,200,000
1881	34,700,000	43,000,000	77,700,000
1882	32,500,000	46,800,000	79,300,000
1883	30,000,000	46,200,000	76,200,000
1884	30,800,000	48,800,000	79,600,000
1885	31,800,000	51,600,000	83,400,000
1886	35,000,000	51,000,000	86,000,000
1887	33,000,000	53,350,000	86,350,000
1888	33,175,000	59,195,000	92,370,000
1889	32,800,000	64,646,000	97,446,000
1890	32,845,000	70,464,000	103,309,000
1891	33,175,000	75,417,000	108,592,000
1892	33,060,000	82,101,000	115,101,000
1893	35,955,000	77,576,000	113,531,000
1894	20,000,000	64,000,000	84,000,000
1895	39,500,000	60,766,300	100,266,300
Total	**$2,033,336,769**	**$1,367,615,300**	**$3,380,952,069**

It will be noticed that the production of silver has declined in the last few years. This is due to the great fall in the bullion price of silver.

The following is a table showing the ratio between gold and silver from 1687 to 1896:

TABLE 54.

Commercial Ratio of Silver to Gold Each Year Since 1687.

[Note.—From 1687 to 1832 the ratios are taken from Dr. A. Soetbeer; from 1833 to 1878 from Pixley and Able's tables; and from 1879 to 1890 from daily cablegrams from London to the Bureau of the Mint.]

Year.	Ratio.	Year.	Ratio.	Year.	Ratio.
1687	14.94	1722	15.17	1757	14.87
1688	14.94	1723	15.20	1758	14.85
1689	15.02	1724	15.11	1759	14.15
1690	15.02	1725	15.11	1760	14.14
1691	14.98	1726	15.15	1761	14.54
1692	14.92	1727	15.24	1762	15.27
1693	14.83	1728	15.11	1763	14.99
1694	14.87	1729	14.92	1764	14.70
1695	15.02	1730	14.81	1765	14.83
1696	15.00	1731	14.94	1766	14.80
1697	15.20	1732	15.09	1767	14.85
1698	15.07	1733	15.18	1768	14.80
1699	14.94	1734	15.39	1769	14.72
1700	14.81	1735	15.41	1770	14.62
1701	15.07	1736	15.18	1771	14.66
1702	15.52	1737	15.02	1772	14.52
1703	15.17	1738	14.91	1773	14.62
1704	15.22	1739	14.91	1774	14.62
1705	15.11	1740	14.94	1775	14.72
1706	15.27	1741	14.92	1776	14.55
1707	15.44	1742	14.85	1777	14.54
1708	15.41	1743	14.85	1778	14.68
1709	15.31	1744	14.87	1779	14.80
1710	15.22	1745	14.98	1780	14.72
1711	15.29	1746	15.13	1781	14.78
1712	15.31	1747	15.26	1782	14.42
1713	15.24	1748	15.11	1783	14.48
1714	15.13	1749	14.80	1784	14.70
1715	15.11	1750	14.55	1785	14.92
1716	15.09	1751	14.39	1786	14.96
1717	15.13	1752	14.54	1787	14.92
1718	15.11	1753	14.54	1788	14.65
1719	15.09	1754	14.48	1789	14.75
1720	15.04	1755	14.68	1790	15.04
1721	15.05	1753	14.94	1791	15.05

TABLE 54—Continued.

Year.	Ratio.	Year.	Ratio.	Year.	Ratio.
1792.....	15.17	1827.....	15.74	1862.....	15.35
1793.....	15.00	1828.....	15.78	1863.....	15.37
1794.....	15.37	1829.....	15.78	1864.....	15.37
1795.....	15.55	1830.....	15.82	1865.....	15.44
1796.....	15.65	1831.....	15.72	1866.....	15.43
1797.....	15.41	1832.....	15.73	1867.....	15.57
1798.....	15.59	1833.....	15.93	1868.....	15.59
1799.....	15.74	1834.....	15.73	1869.....	15.60
1800.....	15.68	1835.....	15.80	1870.....	15.57
1801.....	15.46	1836.....	15.72	1871.....	15.57
1802.....	15.26	1837.....	15.83	1872.....	15.63
1803.....	15.41	1838.....	15.85	1873.....	15.92
1804.....	15.41	1839.....	15.62	1874.....	16.17
1805.....	15.79	1840.....	15.62	1875.....	16.59
1806.....	15.52	1841.....	15.70	1876.....	17.88
1807.....	15.43	1842.....	15.87	1877.....	17.22
1808.....	16.02	1843.....	15.93	1878.....	17.94
1809.....	15.96	1844.....	15.85	1879.....	18.40
1810.....	15.77	1845.....	15.92	1880.....	18.05
1811.....	15.53	1846.....	15.90	1881.....	18.16
1812.....	16.11	1847.....	15.80	1882.....	18.19
1813.....	16.25	1848.....	15.85	1883.....	18.64
1814.....	15.04	1849.....	15.78	1884.....	18.57
1815.....	15.26	1850.....	15.70	1885.....	19.41
1816.....	15.28	1851.....	15.46	1886.....	20.78
1817.....	15.11	1852.....	15.59	1887.....	21.13
1818.....	15.35	1853.....	15.33	1888.....	21.99
1819.....	15.33	1854.....	15.33	1889.....	22.10
1820.....	15.62	1855.....	15.38	1890.....	19.76
1821.....	15.95	1856.....	15.38	1891.....	20.92
1822.....	15.80	1857.....	15.27	1892.....	23.72
1823.....	15.84	1858.....	15.38	1893.....	26.49
1824.....	15.82	1859.....	15.19	1894.....	32.56
1825.....	15.70	1860.....	15.29	1895.....	32.56
1826.....	15.76	1861.....	15.50		

TABLE 55.

	Market Ratio of Silver to Gold Averages.	No. of Tons of Silver to One of Gold in World's Stock.
1800 1810 1820	15.55 to 1	32.2
1830 1840	15.77 to 1	31.1
1850 1860	15.59 to 1	31
1870	15.47 to 1	22.6
1873 1880	15.60-17.27 to 1	18.6
1890	19.87 to 1	18.6
1891	20.92 to 1	18.6
1892	23.72 to 1	16.1
1893	26.49 to 1	....
1894	32 to 1	16.3

We will see that the ratio between the volume of gold and silver in the world has changed directly opposite to the market ratio. The market ratio has fallen because of the law of supply and demand. The world's demand for silver is not as great as that for gold. It will be noticed that the foregoing table gives a ratio between the world's stock of gold and silver.

The ratio between the world's annual production of gold and silver should be obtained by reference to the gold and silver production tables, and this ratio should be compared with the market ratio and the ratio of the total amount in the world for different periods.

The ratio of production in the United States can be obtained by reference to the table on production of the precious metals in the United States.

It should be remembered that the ratio between the annual production of gold and silver in the world is somewhat different than the ratio between the amounts of gold and silver in the world. The market ratio is different from either of these also. There seems to be no direct connection between these ratios whatsoever. The ratio of amounts of gold and silver in the world has varied from 32 to 1 to 16 to 1 to-day, while the annual production has varied in about the opposite direction. The market ratio has in history always followed the annual production rather than the total amounts of the metals in the world. This is due to the fact that there is a large amount of these metals in the world that do not have any effect upon the world's market, as they are of value in the arts and will no doubt never be withdrawn and placed on the market.

The following table (from the British report of 1887) gives the aggregate gold and silver coinage of the United States, England, Germany, Russia, France, Belgium, Italy, Austria and India (which latter, however, coined only silver in each year from 1852 to 1885) stated in millions of pounds sterling. $4.87=1 pound sterling:

TABLE 56.

(From volume of Mineral Industries, eleventh Census, page 143.)

Years.	Gold.	Silver.	Years.	Gold.	Silver.
1852	21.8	9.1	1869	26.7	12.5
1853	32.8	9.7	1870	16.6	17.1
1854	30.8	7.9	1871	21.9	9.0
1855	33.8	8.8	1872	45.1	7.9
1856	35.3	11.0	1873	45.0	20.1
1857	32.4	13.4	1874	27.3	13.4
1858	37.7	21.1	1875	35.2	20.6
1859	39.2	17.9	1876	37.6	23.3
1860	28.6	19.7	1877	38.9	18.9
1861	27.0	12.9	1878	37.8	28.1
1862	32.5	12.2	1879	21.0	20.8
1863	28.3	12.6	1880	26.6	19.5
1864	33.4	15.6	1881	26.2	14.1
1865	22.8	15.4	1882	33.7	10.0
1866	32.6	21.2	1883	21.2	16.3
1867	21.0	17.5	1884	19.2	12.3
1868	25.3	13.5	1885	17.4	14.3

From the foregoing table, which includes the principal nations that demonetized silver in 1873, or shortly after, it appears that the average annual coinage of silver increased from less than 13,500,000 pounds sterling between 1852 and 1873 to an average of over 17,333,333 pounds between 1872 and 1886, and that while the silver coinage of these nations from 1852 to 1873 was less than 31 per cent. of the total coinage, the silver coinage from 1872 to 1886 constituted over 37 per cent. of the total coinage.

TABLE 57.

COMPARATIVE TABLE OF THE VARIOUS ESTIMATES OF THE WORLD'S MONEY.

(In Millions. Muhleman.)

	1848. Mulhall.	1860. Mulhall.	1883. U.S. Mint.	1890. Mulhall.	1892. U.S. Mint.	1894.
Gold.....	$785	$1,700	$3,294	$3,950	$3,901	$4,135
Silver..	1,940	2.400	2,754	4,005	3,931	4,494
Uncov'd paper,	1,300	1,800	1,984	4,230	2,700	2,455
Total....	$4,025	$5,900	$8,032	$12,185	$10,532	$11,084

Estimate of 1892 does not include as many countries as the other estimates. Gold for 1894 excludes India and China ($610,000,000) for comparison. We will see that the world's stock of money has not increased very rapidly since 1890.

WORLD'S STOCK OF MONEY.

(The following tables are quoted from Muhleman.)

It is difficult to get accurate figures on the world's volume of money, but many authorities have made estimates which, for all practical use, are correct.

The aggregate reported coinage of the precious metals up to 1893 was:

Gold	$7,988.733,793
Full legal tender silver.....	7,606.613,856
Subsidiary silver	866,311,200

A large amount of this is re-coinage, since the largest estimate of gold coin and bullion available for coinage is only $4,150,000,000. Silver has been re-coined to about as great an extent as gold.

Europe, with a population of about 364,300,-

000 uses, now, $6,024,300,000 of money, composed of:

Gold	$3,048,000,000
Full legal tender silver	1,160,000,000
Subsidiary silver	510,500,000
Uncovered paper	1,314,800,000

Besides this she has about $100,000,000 minor coins.

Her note issue is $3,484,600,000, and her metallic reserve $2,178,300,000.

"It appears from the following tables that less than one-seventh of the population of the world prefers the single gold standard; but this small proportion possesses three-sevenths of the monetary gold in the world." (The United States is not counted as a single gold country.) These countries with three-sevenths of the monetary gold of the world, possess more commerce than all the world besides. They demand no more gold because of the increased efficiency of money in recent years, to be treated in a subsequent Chapter. It must be remembered that the population of a nation does not give us any idea of its demand for money or of the greatness of its commerce.

The condition of the money stock of North and South America is one of great interest to us.

It appears from the following table that no uniform proportion of currency to population exists as to countries.

Those countries which have the greatest business, it appears have a very low per capita of gold and silver, as compared with the other countries.

TABLE 58.

NORTH AMERICA.

(In Millions of Dollars.)

Single Gold.	Population.	Gold.	Full Silver.	Subsidiary Silver.	Total Specie.	Bank Notes.	Government Notes.	Total Paper.	Specie Reserve.	Uncovered Paper.	Effective.	Minor Coins.
Canada	4.8	14.	.....	5.	19.	30.	18.5	48.5	12.5	36.	55.	1.
Newfoundland	0.2	0.2	.....	0.5	0.7	1.2	.....	1.2	1.2	.....	0.7	.....
British West Indies	1.4	0.5	.....	4.	4.5	2.3	.....	2.3	3.	.....	4.5	0.5
Total	6.4	14.7	.....	9.5	24.2	33.5	18.5	52.0	16.7	36.	60.2	1.5
Double Standard.												
United States	68.9	626.6	550.	76.	1252.6	207.	884.	1091.	778.	313.	1565.6	15.
Cuba and Porto Rico	2.4	18.	2.	1.	21.	3.	.....	3.	2.	1.	22.	0.2
Haiti	1.	2.	2.	1.	5.	4.	.....	4.	2.	2.	7.	0.1
French West India	0.4	0.1	0.2	2.	2.3	1.	.....	1.	0.5	0.5	2.8	0.1
Total	72.7	646.7	554.2	80.	1280.9	215.	884.	1099.	782.5	316.5	1597.4	15.4
Single Silver.												
Mexico	12.1	5.	45.	5.	55.	28.5	.....	28.5	30.5	.....	55.	0.6
Central America	3.3	0.5	6.	2.	8.5	6.	.....	6.	2.	4.	12.5	0.1
British Honduras	0.3	.....	0.3	0.2	0.5	.....	.....	.....	.....	.....	0.5	.....
Total	15.7	5.5	51.3	7.2	64.0	34.5	.....	34.5	32.5	4.	68.	0.7
GRAND TOTAL	94.8	666.9	605.5	96.7	1369.1	283.0	902.5	1185.5	831.7	356.5	1725.6	17.6

TABLE 59.

SOUTH AMERICA.

(In Millions of Dollars.)

	Population.	Gold.	Full Silver.	Subsidiary Silver.	Total Specie.	Bank Notes.	Government Notes.	Total Paper.	Specie Reserves.	Unrecovered Notes.	Effective.	Minor Coins.
Single Gold.												
Brazil	14.6	7.	.....	6.	13.	207.	78.	285.	10.	275.	288.	1.
Uruguay	0.8	4.	.....	1.	5.	10.	.....	10.	1.	9.	14.	0.2
Total	15.4	11.	.....	7.	18.	217.	78.	295.	11.	284.	302.	1.2
Double Standard.												
Argentine	4.2	3.	2.	1.	6.	221.	85.	306.	4.	302.	308.	0.6
Chile	3.3	15.	2.	7.	24.	30.	17.	47.	15.	32.	56.	8.2
Venezuela	2.3	4.	1.	2.	7.	2.	.....	2.	1.	1.	8.	0.2
Guianas	0.4	....	1.	0.2	1.2	0.2	.....	0.2	0.3	....	1.2	0.1
Total	10.2	22.	6.	10.2	38.2	253.2	102.	355.2	20.3	335.	373.2	1.1
Single Silver.												
Paraguay	0.5	0.2	0.2	0.2	0.6	4.	3.3	7.3	0.3	7.	7.6	.....
Ecuador	1.3	0.4	.....	2.	2.4	2.2	.....	2.2	0.7	1.5	3.9	0.1
Colombia	4.	.....	2.	3.	5.	16.	.....	16.	3.	13.	18.	0.2
Peru	3.	0.5	2.	2.	4.5	.....	.....	.....	.....	.....	4.5	0.3
Bolivia	2.3	.....	.....	2.	2.	1.	.....	1.	0.8	0.2	2.2	0.1
Total	11.1	1.1	4.2	9.2	14.5	23.2	3.3	26.5	4.8	21.7	36.2	0.7
GRAND TOTAL	36.7	34.1	10.2	26.4	70.7	493.4	183.3	676.7	36.1	640.7	711.4	3.

TABLE 60.

Recapitulation of Muhleman's Estimates of the World's Stock of Money.

(In Millions.)

Grand Divisions.	Population.	Gold.	Full Silver.	Subsidiary Silver.	Total Specie.	Bank Notes.	Government Notes.	Total Notes.	Specie Reserves.	Uncovered Notes.	Effective.	Minor Coin.
Europe	364.3	348.	1160.	501.5	4709.5	3018.6	466.	3484.6	2178.3	1314.8	6024.3	102.3
Asia	833.8	81.	1800.	153.5	2034.5	193.8	149.5	343.3	206.4	126.5	2161.	248.5
Oceanica	45.4	127.	44.	53.	224.	48.5	0.1	48.6	10.5	5.1	229.1	10.7
Africa	75.9	178.1	20.9	22.3	221.3	24.7	1.5	26.2	34.8	11.5	232 8	11.
North America	94.8	666.9	605.5	96.7	1369.1	283.	902.5	1185.5	831.7	356.5	1725.6	17.6
South America	36.7	34.1	10.2	26.4	70.7	493.4	183.3	676.7	36.1	640.7	711.4	3.
SAME BY STANDARDS NOT BY COUNTRIES.												
By Standards.												
Single Gold	194.4	1782.2	229.	353.5	2354.7	1126.1	264.5	1390.6	863.8	1613.9	2968.6	55.9
Double	331.7	1883.3	1628.4	282.4	3794.1	2072.3	1097.1	3169.4	1923.2	1250.	5044.1	88.4
Single Silver	924.8	469.6	1793.2	217.5	2480.3	863.6	341.3	1204.9	625.3	591.2	3071.5	243.8
Total Grand	1450.9	4135.1	3640.6	853.4	8629.1	4062.	1702.9	5764.9	3412.3	2455.1	11084.2	393.1

TABLE 61.

Approximate Supply of Currency in the Aggregate and Per Capita in the Principal Countries of the World.

(In Millions of Dollars.)

Countries.	Monetary system. G gold. S silv.	Ratio between gold and full legal-tender silver.	Population.	Stock of gold.	Stock of silver.	Uncovered paper.	Per capita in dollars. Gold.	Silver.	Paper.	Total
United States	G S	1 to 15.98	68.9	$626.6	$625.3	$475.7	$9.09	$9.08	$6.90	$25.07
United Kingdom	G	.....	38.8	550.0	112.0	113.4	14.18	2.88	2.92	19.98
France	G S	1 to 15½	38.3	825.0	492.2	88.5	21.54	12.85	2.31	36.70
Germany	G	.....	49.4	625.0	215.0	88.0	12.65	4.35	1.78	18.78
Belgium	G S	1 to 15½	6.2	55.0	54.9	51.2	8.87	8.85	8.26	25.98
Italy	G S	1 to 15½	30.5	96.0	30.0	167.6	3.15	0.98	5.50	9.63
Switzerland	G S	1 to 15½	2.9	15.0	15.0	16.6	5.17	5.17	5.72	16.06
Greece	G S	1 to 15½	2.2	.5	3.0	42.0	0.23	1.36	19.09	20.68
Spain	G S	1 to 15½	17.5	40.0	166.0	107.1	2.29	9.48	6.12	17.89
Portugal	G	.....	4.7	38.9	24.8	55.5	8.27	5.28	11.81	25.36
Roumania	G S	.....	5.8	15.0	8.5	13.3	2.59	1.46	2.29	6.34
Servia	G S	.....	2.2	3.0	1.9	3.8	1.36	0.86	1.73	3.95
Austria-Hungary	G	.....	43.2	130.0	121.0	146.3	3.00	2.81	3.38	9.19
Netherlands	G S	1 to 15⅝	4.7	27.6	56.5	35.9	5.87	12.02	7.64	25.53
Norway	G	.....	2.0	7.3	1.9	3.9	3.65	0.95	1.95	6.55
Sweden	G	.....	4.8	6.5	4.8	4.7	1.35	1.00	0.98	3.33
Denmark	G	.....	2.2	14.2	5.4	5.4	6.46	2.45	2.45	11.36
Russia and Finland	S	1 to 15½	124.0	455.0	48.0	530.0	3.67	0.38	4.27	8.32
Turkey	G S	1 to 15⅞	39.2	50.0	40.0	.....	1.27	1.02	....	2.29
Australia	G	.....	4.7	105.0	7.0	.....	22.34	1.49	....	23.83
Egypt	G	.....	6.8	120.0	15.0	.....	17.65	2.20	....	19.85
Mexico	S	1 to 16½	12.1	5.0	50.0	2.0	0.41	4.13	0.17	4.71
Central American States	S	1 to 15½	3.3	.5	8.0	4.0	0.15	2.42	1.21	3.78
South American States	S	1 to 15½	36.0	40.0	30.0	550.0	1.11	0.83	15.28	17.22
Japan	G S	1 to 16.18	41.1	80.0	88.3	.....	1.95	2.14	....	4.09
India	G S	1 to 15	296.0	.....	950.0	37.0	....	3.21	0.12	3.33
China	S	.....	360.0	.....	750.0	.....	....	2.08	....	2.08
Straits Settlements	G S	.....	3.8	.....	115.0	.....	....	3.26	....	3.26
Canada	G	.....	4.8	14.0	5.0	29.0	2.92	1.04	6.04	10.00
Cuba	G S	1 to 15½	1.6	18.0	1.5	.....	11.25	0.94	....	12.19
Haiti	G S	1 to 15½	1.0	2.0	2.9	.....	2.00	2.90	....	4.90
Bulgaria	G S	1 to 15½	4.3	.8	6.8	.....	0.18	1.58	....	1.76
Total				$3,965.9	$4,055.7	$2,570.9	....	....	....	....

* This table is made up from data given in the Report of the Director of the Mint, 1894, and Mulhall's Dictionary of Statistics.

The effect of any change in monetary legislation upon the ratio should be noted carefully. The ratio is comparatively steady up to about 1873, when it begins to fall rapidly. The rate of the production of silver about that time should also be noted.

CHART No. 11.

THE COMMERCIAL RATIO OF GOLD TO SILVER 1687 TO 1896.

(Refer to p. 115, Table 51. LAUGHLIN'S BIMETALLISM.)

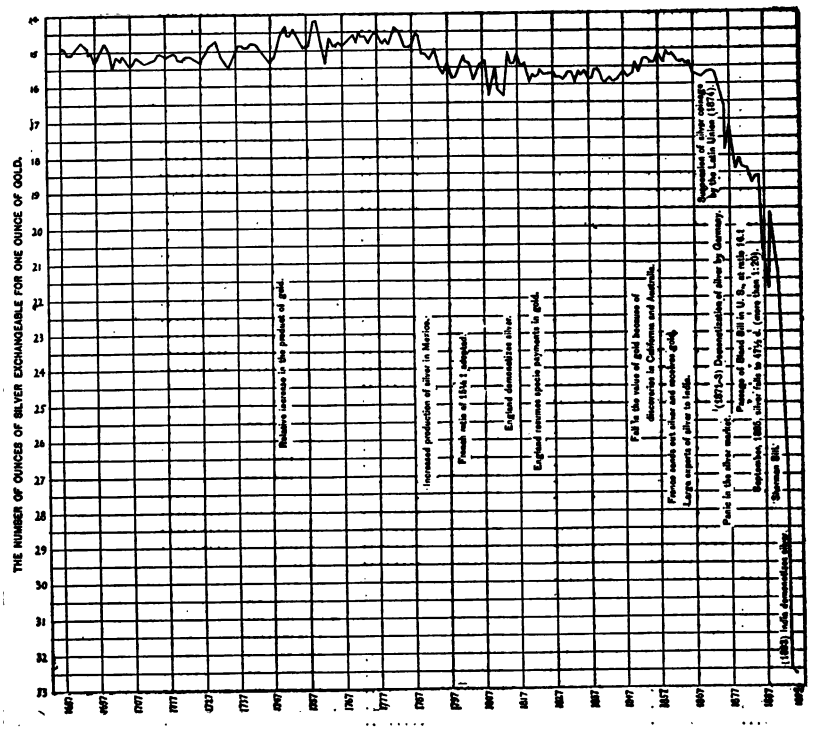


TABLE 62.

Coinage of the Mints of the United States from Their Organization, by Calendar Years.

(From Report Director of Mint, 1894, pp. 206, 207.)

Calendar years.	Gold Coinage.					
	Double eagles.	Eagles.	Half eagles.	Three dollars.	Quarter eagles.	Dollars.
1793 } 1795 }	.....	$27,950	$43,535	.....	.....	.....
1796	.....	60,800	16,995	.....	$165.00	.....
1797	.....	91,770	32,030	.....	4,390.00	.....
1798	.....	79,740	124,335	.....	1,535.00	.....
1799	.....	174,830	37,255	.....	1,200.00	.....
1800	.....	259,650	58,110	.....	.....	.....
1801	.....	292,540	130,030	.....	.....	.....
1802	.....	150,900	265,880	.....	6,530.00	.....
1803	.....	89,790	167,530	.....	1,057.50	.....
1804	.....	97,950	152,375	.....	8,317.50	.....
1805	.....	.....	165,915	.....	4,452.50	.....
1806	.....	.....	320,465	.....	4,040.00	.....
1807	.....	.....	420,465	.....	17,030.00	.....
1808	.....	.....	277,890	.....	6,775.00	.....
1809	.....	.....	169,375	.....	.....	.....
1810	.....	.....	501,435	.....	.....	.....
1811	.....	.....	497,905	.....	.....	.....
1812	.....	.....	290,435	.....	.....	.....
1813	.....	.....	477,140	.....	.....	.....
1814	.....	.....	77,270	.....	.....	.....
1815	.....	.....	3,175	.....	.....	.....
1816	.....	.....	.....	.....	.....	.....
1817	.....	.....	.....	.....	.....	.....
1818	.....	.....	242,940	.....	.....	.....
1819	.....	.....	258,615	.....	.....	.....
1820	.....	.....	1,319,030	.....	.....	.....
1821	.....	.....	173,205	.....	16,120.00	.....
1822	.....	.....	88,980	.....	.....	.....
1823	.....	.....	72,425	.....	.....	.....
1824	.....	.....	86,700	.....	6,500,00	.....
1825	.....	.....	145,300	.....	11,085,00	.....
1826	.....	.....	90,345	.....	1,900.00	.....
1827	.....	.....	124,565	.....	7,000.00	.....
1828	.....	.....	140,145	.....	.....	.....
1829	.....	.....	287,210	.....	8,507.50	.....
1830	.....	.....	631,755	.....	11,350.00	.....
1831	.....	.....	702,970	.....	11,300.00	.....
1832	.....	.....	787,435	.....	11,000.00	.....
1833	.....	.....	968,150	.....	10,400.00	.....
1834	.....	.....	3,660,845	.....	293,425.00	.....
1835	.....	.....	1,857,670	.....	328,505.00	.....
1836	.....	.....	2,765,735	.....	1,369,965.00	.....
1837	.....	.....	1,035,605	.....	112,700.00	.....
1838	.....	$72,000	1,600,420	.....	137,345.00	.....
1839	.....	382,480	802,745	.....	191,622.50	.....
1840	.....	473,380	1,048,530	.....	153,572.50	.....
1841	.....	656,310	380,945	.....	54,602.50	.....
1842	.....	1,089,070	655.330	.....	85,007.50	.....

TABLE 62—Continued.

Gold Coinage.

Calendar years.	Double eagles.	Eagles.	Half eagles.	Three dollars.	Quarter eagles.	Dollars.
1843....	.....	2,506,240	4,275,425	.....	1,327,132.50	.....
1844....	.....	1,250,610	4,087,715	.....	89,345.00	.....
1845....	.....	736,530	2,743,640	.....	276,277.50	.....
1846....	.....	1,018,750	2,736,155	.....	279,272.50	.....
1847....	.....	14,337,580	5,382,685	.....	482,060.00	.....
1848....	.....	1,813,340	1,863,560	.....	98,612.50	.....
1849....	.....	6,775,180	1,184,645	.....	111,147.50	$936,789
1850....	$26,225,220	3,489,510	860,160	.....	895,547.50	511,301
1851....	48,043,100	4,393,280	2,651,955	.....	3,867,337.50	3,658,820
1852....	44,860,520	2,811,060	3,689,635	.....	3,283,827.50	2,201,145
1853....	26,646,520	2,522,580	2,305,095	.....	3,519,615.00	4,384,149
1854....	18,052 340	2,305.760	1,513,235	$491,214	1,896,397.50	1,657,016
1855....	25,046 820	1,487,010	1,257,090	171.465	600,700.00	824,883
1856....	30,437,560	1,429,900	1,806,665	181,580	1,213,117 50	1,788,996
1857....	28,797,500	481 060	1,232,970	104,673	796,235.00	801,602
1858....	21.873,480	843,210	439,770	6.399	144,082.50	131,472
1859....	13,782,840	253 930	361,235	46,914	142,220.00	193,431
1860....	22,584,400	278,830	352,365	42,465	164,360.00	51,234
1861....	74.989,060	1,287.330	3,332,130	18,216	3,241.295.00	527,499
1862....	18 926,120	234,950	69,825	17,355	300.882.50	1,326.865
1863....	22,187,200	112,480	97,360	15,117	27,075.00	6,250
1864....	19,958,900	60.800	40,540	8.040	7,185.00	5,950
1865....	27,874,000	207,050	144,535	3,495	62,302.50	3,725
1866....	30,820,500	237,800	253,200	12,090	105,175.00	7,180
1867....	23,436 300	121,400	179,600	7,950	78,125.00	5,250
1868....	18,722,000	241,550	288,625	14,625	94,062 50	10,525
1869....	17,238,100	82,850	163,925	7,575	84,612 50	5,925
1870....	22,819,480	164,430	143,550	10,605	51,387.50	9,335
1871....	20.456,740	254.650	245.000	3,990	68,375 00	3,930
1872....	21,230.600	244,500	275,350	6,090	52,575.00	3,530
1873....	55,456 700	173.680	754,605	75	512,562.50	125,125
1874....	33,917,700	799.270	203.530	125,460	9,850.00	198,820
1875....	32,737,820	78,350	105,240	60	30,050.00	420
1876....	46,386,920	104,280	61,820	135	23,052.50	3,245
1877....	43.504,700	211,490	182,660	4,464	92,630.00	3,920
1878....	45,916,500	1,031.440	1,427,470	246,972	1,160,650.00	3,020
1879....	28,889.260	6,120,320	3,727.155	9,090	331,225.00	3,030
1880....	17,749,120	21,715,160	22,831,765	3,108	7,490.00	1,636
1881....	14,585,200	48,796.250	33,458,430	1,650	1,700.00	7,660
1882....	23,295 400	24,740.640	17.831.885	4,620	10,100.00	5,040
1883....	24,960,040	2,595,400	1,647,990	2,820	4,900.00	10.840
1884....	19,944,200	2,110,800	1,922.250	3,318	4,982.50	6,206
1885....	13,875,560	4,815.270	9,065 030	2,730	2,217.50	12,205
1886....	22,120	10,621,600	18,282,160	3,426	10,220 00	6,016
1887....	5.662,420	8,706,800	9,560,435	18,480	15,705.00	8,543
1888....	21,717,320	8,030,310	1.560.980	15,873	40,245.00	16,080
1889....	16,995,120	4,298,850	37,825	7,287	44,120.00	30,729
1890....	19.399,080	755,430	290,640	.....	22,032.50	.....
1891....	25.891,340	1,956,000	1,347,065	.....	27,600.00	.....
1892....	19,238,760	9,817 400	5,724,700	.....	6,362.50	.....
1893....	27,178,320	20,132,450	9,610,985	.....	75,265.00	.....
1894....	48,3 0,800	26,032,780	5,152,275	.....	10,305.00	.....
	1,210,703,700	259,127,230	212,921,655	1,619,376	28,681,005.00	19,499,337

TABLE 62—Continued.

Calendar Years.	Silver Coinage. Trade Dollars.	Dollars.	Subsidiary Silver.
1793 } 1795 }	.....	$204,791	$165,892.80
1796	.....	72,920	4,198.50
1797	.....	7,776	6,774.45
1798	.....	327,536	2,755.00
1799	.....	423,515	.....
1800	.....	220,920	3,376.00
1801	.....	54,454	20,304.00
1802	.....	41,650	16,693.00
1803	.....	66,064	21,054.00
1804	.....	19,570	80,770.50
1805	.....	321	149,067.50
1806	.....	.....	471,319.00
1807	.....	.....	597,448.75
1808	.....	.....	684,300.00
1809	.....	.....	707,376.00
1810	.....	.....	638,773.50
1811	.....	.....	608,340.00
1812	.....	.....	814,029.50
1813	.....	.....	620,951.50
1814	.....	.....	561,687.50
1815	.....	.....	17,308.00
1816	.....	.....	28,575.75
1817	.....	.....	607,783.50
1818	.....	.....	1,070,454.50
1819	.....	.....	1,140,000.00
1820	.....	.....	501,680.70
1821	.....	.....	825,762.45
1822	.....	.....	805,806.50
1823	.....	.....	895,550.00
1824	.....	.....	1,752,477.00
1825	.....	.....	1,564,583.00
1826	.....	.....	2,002,090.00
1827	.....	.....	2,869,200.00
1828	.....	.....	1,575,600.00
1829	.....	.....	1,933,078.00
1830	.....	.....	2,496,400.00
1831	.....	.....	3,175,600.00
1832	.....	.....	2,579,000.00
1833	.....	.....	2,759,000.00
1834	.....	.....	3,415,002.00
1835	.....	.....	3,443,003.00
1836	.....	1,000	3,605,100.00
1837	.....	.....	2,096,010.00
1838	.....	.....	2,333,243.40
1839	.....	300	2,209,478.20
1840	.....	61,005	1,665,698.00
1841	.....	173,000	959,750.00
1842	.....	184,618	2,148,132.00
1843	.....	165,100	3,669,650.00
1844	.....	20,000	2,215,550.00
1845	.....	24,500	1,848,700.00

TABLE 62—Continued.

Calendar Years.	Silver Coinage. Trade Dollars.	Dollars.	Subsidiary Silver.
1846	.....	169,600	2,388,980.00
1847	.....	140,750	2,238.700.00
1848	.....	15,000	2,025,050.00
1849	.....	62,600	2,052,350.00
1850	.....	47,500	1,818,600.00
1851	.....	1,300	773,097.00
1852	.....	1,100	998,370.00
1853	.....	46,110	9,031.461.00
1854	.....	33,140	8,586,180.00
1855	.....	26,000	3,475,245.00
1856	.....	63,500	5,078,740.00
1857	.....	94,000	5,384,760.00
1858	.....	.....	8,495,370.00
1859	.....	636 500	2,647,950.00
1860	.....	733,930	1,525,460.00
1861	.....	78,500	3,705,240.00
1862	.....	12,090	1.240,426.50
1863	.....	27,660	781,607.80
1864	.....	31,170	578.747.10
1865	.....	47,000	644,005.00
1866	.....	49,625	932.784.25
1867	.....	60,325	848,551.25
1868	.....	182,700	891,643.00
1869	.....	424,300	841,843.00
1870	.....	445,462	932,793.50
1871	.....	1.117,136	1,986,902.30
1872	.....	1,118,600	1,385,888.50
1873	1,225,000	296,600	2,503,147.90
1874	4,910,000	.....	1,941,776.70
1875	6 279,600	.....	9,068,293.00
1876	6,192.150	.....	18,311.157.50
1877	13,092,710	.....	15,300,335.50
1878	4,259,900	22,495,550	1,763,400.00
1879	1,541	27,560,100	8,135.00
1880	1,987	27,397 355	12.351.75
1881	960	27,927,975	11.228 75
1882	1,097	27 574,160	397,935.00
1883	979	28,470.039	775,950.45
1884	.....	28,136,875	397,991.15
1885	.....	28,697.767	264.409.20
1886	.....	31,423,886	662 823.90
1887	.....	33,611,710	1,579.371.40
1888	.....	31.990,833	1,034,773.45
1889	.....	34,651,811	844,872.15
1890	.....	38,043,004	1,159,904.20
1891	.....	23,562,735	3.956.121.60
1892	.....	6,333,245	*6.307,833.00
1893	.....	1,455,792	†7,347,005.80
1894	.....	3,083,972	6,106,378.85
	$35,965,924	$430,457,987	$215,485,708.15

* Includes $475,000 in Columbian coins.
† Includes $2,086,058.25 in Columbian coins.

TABLE 62—Continued.

Calendar Years.	Total Coinage.			
	Gold.	Silver.	Minor.	Total.
1793.....	$71,485.00	$370,683.80	$11,373.00	$453,541.80
1795.....				
1796.....	77,960.00	77,118.50	10,324.40	165,402.90
1797.....	128,190 00	14 550.45	9,510.34	152.250.79
1798.....	205,610.00	330,291.00	9,797.00	545,698.00
1799.....	213,285.00	423,515.00	9,106.68	645,906.68
1800.....	317,760.00	224,296.00	29,279.40	571,335.40
1801.....	422,570.00	74,758.00	13,628.37	510.956.37
1802.....	423,310.00	58,343.00	34,422.83	516,075.83
1803.....	258.377 50	87.118.00	25,203.03	370,698.53
1804.....	258,642 50	100,340.50	12,844.94	371.827.94
1805.....	170,367.50	149,388.50	13,483.48	333,239.48
1806.....	324,505.00	471 319.00	5,260.00	801.084.00
1807.....	437 495.00	597,448.75	9,652.21	1,044.595.96
1808.....	284,665.00	684,300 00	13,090.00	982,055.00
1809.....	169,375 00	707,376.00	8,001.53	884,752.53
1810.....	501 435.00	638,773 50	15,660.00	1,155.868.50
1811.....	497,905.00	608,340.00	2,495.95	1,108,740.95
1812.....	290,435.00	814,029 50	10,755.00	1,115,219.50
1813.....	477,140.00	620,951.50	4,180.00	1,102.271.50
1814.....	77,270.00	561.687 50	3,578.30	642 535.80
1815.....	3,175.00	17,308.00	.....	20.483.00
1816.....	.....	28,575 75	28,209.82	56.785.57
1817.....	.....	607,783.50	39,484 00	647.267.50
1818.....	242,940.00	1,070.454.50	31,670 00	1,345.064.50
1819.....	258.615.00	1.140,000.00	26,710.00	1,425.325.00
1820.....	1,319,030.00	501,680.70	44,075.50	1,864,786.20
1821.....	189.325 00	825,702.45	3,890.00	1,018,977.45
1822.....	88,980.00	805,806.50	20,723.39	915,509.89
1823.....	72,425.00	895,550.00	.....	967,975.00
1824.....	93,200 00	1,752.477.00	12,620.00	1,858,297.00
1825.....	156 385.00	1,564,583 00	14,926.00	1,735.894.00
1826.....	92,245.00	2.002 090.00	16.344.25	2,110.679.25
1827.....	131,565 00	2.869,200.00	23,577 32	3.024,342 32
1328.....	140,145.00	1,575,600.00	25,636.24	1,741,381.24
1829.....	295,717.50	1,994.578.00	16,580.00	2,306.875.50
1830.....	643 105.00	2,495,400.00	17,115.00	3,155,620.00
1831.....	714,270.00	3,175.600.00	33,603.60	3.923 473.60
1832.....	798 435 00	2,579,000.00	23,620 00	3,401.055.00
1833.....	978.550 00	2,759,000.00	28. 60.00	3 765,710.00
1834.....	3,954,270.00	3,415,002.00	19,151 00	7,388.423.00
1835.....	2,186,175.00	3,443,003 00	39,489.00	5.668,667.00
1836.....	4,135 700.00	3,606,100.00	23.100.00	7,764.900.00
1837.....	1,148,305.00	2.096,010 00	55,583.50	3.299,898.00
1838.....	1,809.765.00	2,333,243.40	63.702 00	4,206.710 40
1839.....	1,3?6 847.50	2.209,778 20	31.286.61	3.617.912.31
1840.....	1,675.482.50	1,726,703.00	24,627.00	3,426,812.50
1841.....	1,091,857 50	1,132.750.00	15.973 67	2,240.581.17
1842.....	1,829.407 50	2,332.750.00	23 833 90	4,185,991.40
1843.....	8,108,797.50	3.834.750 00	24.283 20	11.967 830.70
1844.....	5,427.670 00	2,235.550.00	23.987.52	7.687,207.52
1845.....	3,756,447.50	1,873,200.00	38,948.04	5,668,595.54

TABLE 62—Continued.

Calendar Year.	Total Coinage.			
	Gold.	Silver.	Minor.	Total.
1846.....	4,084,177.50	2,558,580.00	41,208.00	6,633,965.50
1847.....	20,202,325.00	2,374,450.00	61,856.69	22,638,611.69
1848.....	3,775,512.50	2,040,050.00	64,157.99	5,879,720.49
1849.....	9,007,761.50	2,114,950.00	41,984.32	11,164,695.82
1850.....	31,981,738.50	1,866,100.00	44,467.50	33,892,306.00
1851.....	62,614,492.50	774,397.00	99,635.43	63,488,524.93
1852.....	56,846,187.50	999,410.00	50,630.94	57,896,228.44
1853.....	39,377,909.00	9,077,571.00	67,059.78	48,522,539.78
1854.....	25,915,962.50	8,619,270.00	42,638.35	34,577,870.85
1855.....	29,387,968.00	3,501,245.00	16,030.79	32,905,243.79
1856.....	36,857,768.50	5,142,240.00	27,106.78	42,027,115 28
1857.....	32,214,040.00	5,478,760 00	178,010.46	37,870,810.46
1858.....	22,938,413.50	8,495,370.00	246,000 00	31,679,783.50
1859.....	14,780,570 00	3,284,450 00	364,000.00	18,429,020.00
1860.....	23,473,654.00	2,259,390.00	205,660.00	25,938,704,00
1861.....	83,395,530.00	3,783,740.00	101,000.00	87,280,270.00
1862.....	20 875,997.50	1,252,516.50	280,750.00	22,409,264.00
1863.....	22,445,482.00	809.267 80	498,400.00	23,753,149.80
1864.....	20,081,415.00	609,917 10	926,687.14	21,618.019.24
1865.....	28,295,107.50	691,005.00	968,552 86	29 954,665.36
1866.....	31,435.945.00	982,409.25	1,042,960.00	33,461,314.25
1867.....	23.828,625.00	908,876 25	1,819,910.00	26.557,411.25
1868.....	19,371,387.50	1.074,343.00	1,697,150 00	22,142.880.50
1869.....	17,582,987.50	1,266 143.00	963,000 00	19,812,130.50
1870.....	23,198.787.50	1,378,255.50	350,325.00	24.927,368.00
1871.....	21,032,685.00	3,104,038.30	99,890.00	24,236,613.30
1872.....	21,812.645.00	2,504,488.50	369,380.00	24,686 513.50
1873.....	57.022,747.50	4,(24.747.60	379,455.00	61,426,956.10
1874.....	35,254,630.00	6,851,776.70	342,475.00	42,448,881.70
1875.....	32,951,940.00	15,347,893.00	246,970.00	48,546,803.00
1876.....	46,579,452.50	24,503,307.50	210,800.00	71,293,560.00
1877.....	43,999,864.00	28,393,045.50	8,525.00	72,401,434.50
1878.....	49,786,052 00	28,518,850.00	58,186.50	78,363,088.50
1879.....	39,080,080.00	27,569,776.00	165,003.00	66.814,859.00
1880.....	62,308.279 00	27,411,693.75	391,395 95	90,111,368.70
1881.....	96,850,890.00	27,940,163 75	428,151.75	125,219,205.50
1882.....	65,887.685.00	27,973,132.00	960,400.00	94,821,217.00
1883.....	29,241,990 00	29,246,968 45	1,604,770.41	60,093,728.86
1884.....	23 991,756.50	28,534,866.15	796,483.78	53,323,106.43
1885.....	27 773,012.50	28,962,176 20	191,622.04	56,926,810.74
1886.....	28,945,542.00	32,086,709.90	343,186.10	61,375,438.00
1887.....	23,972 383.00	35,191,081 40	1,215.686.26	60,379,150.66
1888.....	31,380,808.00	33,025,606.45	912.200.78	65,318,615.23
1889.....	21,413,931.00	35,496,683 15	1,283,408.49	58,194,022.64
1890.....	20,467.182.50	39.202.908.20	1,384,792.14	61,054,882.84
1891.....	29,222,005.00	27,518,856 60	1,312,441 00	58,053,302.60
1892.....	34,787,222.50	12,641,078.00	961.480.42	48,389,780.92
1893.....	56 997,020 00	8.802,797.30	1,134.931 70	66,934,749.00
1894.....	79,546,160.00	9,200,350.85	438,177.92	89,184,688.77
Total.....	1,732,552,323.00	681,909,619.15	26,481,531.79	2,440,943,473.94

TABLE 63.

STATEMENT OF THE COIN AND PAPER CIRCULATION OF THE UNITED STATES ON JUNE 30, FROM 1860 TO 1896.

(Prepared by Loans and Currency Division, Treasury Department.)

Year.	Coin in United States, including Bullion in Treasury.	Paper Money in United States.	Total Money.	Coin Bullion and Paper Money in Treasury.	Total Money in Circulation.	Population.	Money in United States per Capita.	Circulation per Capita.
1860	$235,000,000	$207,102,477	$442,102,477	$6,696,225	$435,407,252	31,443,321	$14.06	$13.85
1861	250,000,000	202 005,767	452,005,767	3,600,000	448,405.767	32,064,000	14.09	13.98
1862	25,000,000	333,452,079	358,452,079	23,754,335	334,697,744	32,704,000	10.96	10.23
1863	25,000,000	649,867,283	674.867,283	79,473,245	595,394.038	33,365,000	20.23	17.84
1864	25,000,000	680,588,067	705,588,067	35.946,589	669,641.478	34,046,000	20 72	19.67
1865	25,000,000	745.129,755	770,129.755	55,426.760	714,702,995	34,748,000	22.16	20.57
1866	25,000,000	729,327,254	754,327.254	80,839,010	673.488,244	35.469,000	21.27	18 99
1867	25,090,000	703,200,612	728,200,612	66 208,543	661,992.069	36,211,000	20.11	18.28
1868	25,000,000	691,553.578	716,553,578	36,449,917	680,103,661	36,973,000	19.38	18.39
1869	25,000,000	690,351,180	715,351,180	50,898,289	664,452.891	37,756,000	18.95	17.60
1870	25,000,000	697,868,461	722.868,461	47,655,667	675.212,794	38,558,371	18.73	17.50
1871	25 000,000	716,812,174	741.812,174	25,923,169	715,889.005	39.555 000	18.75	18.10
1872	25,000,000	737,721,565	762,721,565	24,412 016	738,309,549	40 596,000	18 70	18.19
1873	25,000,000	749,445,610	774,445,610	22.563.801	751,881.809	41,677.000	18.58	18.04
1874	25,000.000	781,024,781	806,024,781	29,941,750	776,083,031	42,796,000	18.83	18.13
1875	25,000,000	773,273,509	798,273,509	44,171,562	754,101,947	43,951,000	18.16	17.16
1876	52,418,734	738,264,550	790,683.284	63,073,896	727,609.388	45,137,900	17.52	16.12
1877	65,837,506	697,216.341	763,053,847	40 738,964	722,314,883	46,353.000	16.46	15.58
1878	102,047.907	689,205.669	791,253,576	62,120,942	729,132 634	47,598,000	16.62	15.32
1879	357,268,178	694,253.363	1,051.521,541	232,889,748	818.631,793	48,866,000	21.52	16.75
1880	494,363,884	711.565,313	1.205.929,197	232,546.969	973,382,228	50,155,783	24.04	19 41
1881	647,868,682	758.673,141	1,406,541,823	292,303,704	1,114,238,119	51,316.000	27.41	21.71
1882	703,974,839	776 556,880	1,480.531,719	306,241,300	1,174.290,419	52,495.000	28.20	22.37
1883	769,740,048	873,749,768	1,643,489,816	413.184,120	1,230,305,696	53,693,000	30.60	22.91
1884	801.068 939	904,385,250	1,705,454,189	461,528,220	1,243,925.969	54,911,000	31.06	22.65
1885	872,175.823	945,482,513	1,817,658,336	525.089,721	1.292,568,615	56,148.000	32.37	23.02
1886	903,027,304	905,532.390	1.808.559,694	555.859 169	1,252,700,525	57,404,000	31 50	21.82
1887	1,007,513,901	892,928,771	1,900,442,672	582,903,529	1,317.539.143	58,680,000	32.39	22.45
1888	1,092,391,690	970,564,259	2 062,955,949	690,785,079	1,372,170.870	59,974,000	34.39	22.88
1889	1,100,612,434	974,738 277	2,075,350.711	694,989,062	1,380,361.649	61,289,000	33.86	22.52
1890	1,152,471,632	991,754.521	2.144,226,159	714,974,889	1,429,251,270	62,622.250	34.24	22.82
1891	1,163,185,054	1,032,039,021	2,195,224.075	697,783,368	1,497,440,707	63,975,000	34.31	23.41
1892	1,232,854,331	1,139,745,170	2.372 599.501	771,252,314	1,601,347.187	65.520,000	36.21	24.44
1893	1,213,413,584	1,109,988,808	2,323,402,392	726,701,147	1.596,701,245	66,946,000	34.70	23.85
1894	1,252,071,667	1,169,390,080	2.421.461,747	759,626,073	1,661 835,674	68.397,000	35.40	24.30
1895	1,260,710,620	1,137,579,914	2,398,290,534	794,158,566	1,604,131,968	69,878,000	34.32	22.96

TABLE NO. 64.

Estimated Amount of Money in Actual Circulation in the United States at the Close of the Fiscal Year from 1860 to 1896.

(In Millions of Dollars.)

July 1.	Gold Coin.	Gold Certificates.	Silver Dollars.	Silver Certificates.	Subsidiary Silver.	United States Notes.	Demand Notes.	National Bank Notes.	State Bank Notes.	Fractional Currency.	Currency Certificates.	Total.	Per Capita.
1860.....	228.3	....	....	....	...	....	....	....	207.1	...	....	435.4	$18.85
1861.....	216.4	...	....	....	....	...	....	....	202 0	....	. ..	448.4	18.98
1862.....	25.0	....	....	...	....	72.9	53.0	....	183.8	....	....	334.7	10.23
1863.....	25.0	....	....	....	....	312.5	3.4	....	238.7	15.9	....	595.4	17.84
1864.....	25.0	....	....	....	....	415.1	....	31.2	179.2	19.1	....	669.6	19.67
1865.....	25.0	....	....	....	....	378.9	....	146 1	142.9	21.7*	....	714.7	20.57
1866	25.0	....	....	....	....	327.8	....	276.0	20.0	24·7	....	673.5	18.99
1867.....	25 0	....	....	....	....	319.4	....	286.8	4.5	26.3	....	662.0	18.28
1868.....	25.0	....	....	....	....	328.6	....	294.4	3.2	29.0	....	680.1	18.39
1869.....	25.0	....	....	....	...	314.7	....	291.7	2.6	30 4	....	664.5	17.60
1870.....	25.0	....	....	....	....	325.0	....	288.6	2.2	34.4	....	675.2	17.50
1871.....	25.0	....	...	....	....	343.1	....	311.4	2.0	34.4	....	715.9	18.10
1872.....	25.0	....	....	....	....	346.2	....	329.0	1.7	36.4	....	738.3	18.19
1873.....	25.0	....	....	....	....	348 5	....	339.0	1.4	38.1	....	751.9	18.04
1874.....	25.0	....	....	....	....	371.4	....	340.3	1.2	38.2	....	776.1	18.13
1875.....	25.0	....	....	....	....	349.7	....	340.5	1.0	37.9	....	754.1	17.16
1876.....	25.0	....	....	....	21.1	331.4	....	316.1	1.0	32.9	....	727.6	16.12
1877.....	25.0	...	....	....	37.9	337.9	....	301.3	....	20.2	....	722 3	15.58
1878.....	25.0	....	1.2	...	53 9	320.9	....	311.7	....	16.4	....	729.1	15.32
1879.....	110.5	15.3	8.0	0.4	61.3	301.6	....	321.4	....	....	....	818.6	16.75
1880.....	225 7	8.0	20.1	5.8	48.5	328.1	Treasury	337.4	....	....	....	973.4	19.41
1881	315.3	5.8	29.3	39.1	46.8	327.9	Notes	349.7	....	....	....	1,114.2	21.71
1882.....	368.2	5.0	32.4	54 5	46.4	325.3	of 1890.	352.5	....	....	....	1,174.3	22.37
1883.....	344.7	59.8	35.6	72.6	46 5	323.2	....	347.9	....	....	....	1,230.3	22.91
1884.....	340.6	71·1	40.7	96.4	45.7	318.7	....	330.7	...	....	....	1,243.9	22.65
1885.....	341.7	126.7	39.1	101 5	43.7	331 2	....	308.6	. ..	....	....	1,292 6	23.02
1886.....	358.2	76.0	52.7	88 1	46.2	323.8	....	307.7	....	....	....	1,252.7	21.82
1887.....	376.5	91 2	55.5	142.1	48.6	326.7	....	276.9	....	....	....	1,317.5	22.45
1888.....	391.1	121.1	55.5	200.8	50.4	308.0	....	245.3	....	....	....	1,372.2	22.88
1889.....	376.5	117.1	54.5	257.2	51.5	316.4	....	207.2	....	....	....	1,380.4	22.52
1890.....	374.3	130.8	56.3	297.5	54.0	334.7	....	181.6	....	....	....	1,429.3	22.82
1891.....	407.3	120.1	58.8	307.2	58.2	343.2	40.3	162.2	....	....	....	1,497.4	23.41
1892.....	408.6	141.1	56.8	326.7	63.3	309.6	98.3	167.2	....	....	29.8	1,601.3	24.44
1893.....	408.5	92.6	56.9	326.8	65 5	319.1	140.9	174.7	....	....	11.7	1,596.7	23.85
1894.....	496.0	66 3	52.6	327.0	58 5	266.6	134.7	200.2	....	...	58.9	1,660.8	24.28
1895.....	480.2	48.4	52.0	319.7	60.2	265.1	116.0	207.0	....	....	55.4	1,604.1	22.96

TABLE 65.

An Official Statement Showing Amounts of Gold and Silver Coins and Certificates, U. S. Notes and National Bank Notes in Circulation January 1, 1895.

	General Stock, Coined or Issued.	In Treasury.	Amount in Circulation Jan. 1, 1895.	Amount in Circulation Jan. 1, 1894.
Gold Coin	$577,380,396	$91,879,020	$485,501,376	$508,602,811
Standard Silver Dollars	422,426,749	364,537,659	57,889,090	57,869,589
Subsidiary Silver	77,155,722	14,483,636	62,672,086	65,854,740
Gold Certificates	53,420,869	58,960	53,361,909	77,412,179
Silver Certificates	336,924,504	5,846,720	331,077,784	329,545,650
Treasury Notes, Act July 14, 1890	150,823,731	28,369,950	122.453,781	151,965,267
United States Notes	346,681.016	81,919,158	264,761,858	302,541,814
Currency Certificates, Act June 8, 1872	48,965,000	1,960,000	47,005,000	39,045,000
National Bank Notes	206,605,710	4,759,972	201,845,738	196,181,216
Totals	$2,220,383,697	$593,815,075	$1,626,568,622	$1,729,018,266
Gold Bullion	.....	47,727,334	.....	.....
Silver Bullion	.....	125,014,161	.....	.....

TABLE 65½.

Ownership of Gold and Silver in the United States July 1, 1895.

Ownership.	Gold Coin and Bullion.	Silver Coin and Bullion.				Total Gold and Silver Coin and Bullion.
		Silver Dollars.	Subsidiary Silver Coin.	Silver Bullion.	Total Silver.	
United States Treasury	*$107,512,362	†$51,574,305	$16,552,845	$124,479,849	$192,606,999	$300,119,361
National banks (July 11, 1895)	‡171,217,437	§37,375,516	5,834,241	.....	43,209,757	214,427,194
Private banks and individuals	357,439,189	334,339,398	54,385,477	.....	388,724,875	746,164,064
Total	$636,168,988	$423,289,219	$76,772,563	$124,479,849	$624,541,631	$1,260,710,619

* Gold and silver bullion in the Treasury exclusive of $48,381,569 gold certificates outstanding.
† Silver dollars in the Treasury exclusive of $319,731,752 silver certificates outstanding.
‡ Includes $53,740,600 Treasury and Clearing-house gold certificates.
§ Includes $30,127,457 silver certificates held by national banks.

TABLE 66.

HIGHEST, LOWEST, AND AVERAGE VALUE OF A UNITED STATES SILVER DOLLAR, MEASURED BY THE MARKET PRICE OF SILVER, AND THE QUANTITY OF SILVER PURCHASABLE WITH A DOLLAR AT THE AVERAGE LONDON PRICE OF SILVER, EACH YEAR SINCE 1873.

Calendar years.	Bullion value of a silver dollar.			Grains of pure silver at average price purchasable with a United States silver dollar. *
	Highest.	Lowest.	Average.	
1873	$1.016	$0.981	$1.004	369.77
1874	1.008	.970	.988	375.76
1875	.977	.941	.964	385.11
1876	.991	.792	.894	415.27
1877	.987	.902	.929	399.62
1878	.936	.839	.891	416.66
1879	.911	.828	.868	427.70
1880	.896	.875	.886	419.49
1881	.896	.862	.881	421.87
1882	.887	.847	.878	422.83
1883	.868	.847	.858	432.69
1884	.871	.839	.861	431.18
1885	.847	.794	.823	451.09
1886	.797	.712	.769	482.77
1887	.799	.733	.758	489.78
1888	.755	.706	.727	510.66
1889	.752	.746	.724	512.93
1890	.926	.740	.810	458.83
1891	.827	.738	.764	485.76
1892	.742	.642	.674	550.79
1893	.655	.513	.604	615.10

*371.25 grains of pure silver are contained in a silver dollar.

TABLE 67.

AVERAGE VALUE IN DOLLARS AND CENTS OF AN OUNCE OF FINE SILVER ON THE LONDON MARKET, FROM 1833 TO 1894.

(See U. S. Illustrated Abstract, 1894, p. 34.)

Year.	Dollars.	Year.	Dollars.	Year.	Dollars.
1833	1.297	1854	1.348	1875	1.246
1834	1.313	1855	1.344	1876	1.156
1835	1.308	1856	1.344	1877	1.201
1836	1.315	1857	1.353	1878	1.152
1837	1.305	1858	1.344	1879	1.122
1838	1.304	1859	1.36	1880	1.145
1839	1.323	1860	1.352	1881	1.138
1840	1.323	1861	1.333	1882	1.136
1841	1.316	1862	1.346	1883	1.11
1842	1.303	1863	1.345	1884	1.113
1843	1.297	1864	1.345	1885	1.0645
1844	1.304	1865	1.338	1886	.9946
1845	1.298	1866	1.339	1887	.97823
1846	1.30	1867	1.328	1888	.93897
1847	1.308	1868	1.326	1889	.93512
1848	1.304	1869	1.325	1890	1.04633
1849	1.309	1870	1.328	1891	.98782
1850	1.316	1871	1.326	1892	.87106
1851	1.337	1872	1.322	1893	.78031
1852	1.326	1873	1.298	1894	.63479
1853	1.348	1874	1.278		

TABLE 68.

HIGHEST, LOWEST, AND AVERAGE PRICE OF BAR-SILVER IN LONDON.

(Per ounce British standard (0.925), since 1833, and the equivalent in United States gold coin of an ounce 1000 fine, taken at the average price.)

Years.	Lowest.	Highest.	Average.	Average
	Pence.	Pence.	Pence.	
1833	58.750	59.875	59.188	$1.297
1834	59.750	60.750	59.938	1.313
1835	59.250	60.000	59.688	1.308
1836	59.625	60.375	60.000	1.315
1837	59.000	60.375	59.563	1.305
1838	59.500	60.125	59.500	1.304
1839	60.000	60.625	60.375	1.323
1840	60.125	60.750	60.375	1.323
1841	59.750	60.375	60.063	1.316
1842	59.250	60.000	59.438	1.303
1843	59.000	59.625	59.188	1.297
1844	59.250	59.750	59.500	1.304
1845	58.875	59.875	59.250	1.298
1846	59.000	60.125	59.313	1.300
1847	58.875	60.375	59.688	1.308
1848	58.500	60.000	59.500	1.304
1849	59.500	60.000	59.750	1.309
1850	59.500	61.500	61.063	1.316
1851	60.000	61.625	61.000	1.337
1852	59.875	61.875	60.500	1.326
1853	60.625	61.875	61.500	1.348
1854	60.875	61.875	61.500	1.348
1855	60.000	61.625	61.313	1.344
1856	60.500	62.250	61.313	1.344
1857	61.000	62.375	61.750	1.353
1858	60.750	61.875	61.313	1.344
1859	61.750	62.750	62.063	1.360
1860	61.250	62.375	61.688	1.352
1861	60.125	61.375	60.813	1.333
1862	61.000	62.125	61.438	1.346
1863	61.000	61.750	61.375	1.345
1864	60.625	62.500	61.375	1.345
1865	60.500	61.625	61.063	1.338
1866	60.375	62.250	61.125	1.339
1867	60.375	61.250	60.563	1.328
1868	60.125	61.125	60.500	1.326
1869	60.000	61.000	60.438	1.325
1870	60.250	60.750	60.563	1.328
1871	60.188	61.000	60.500	1.326
1872	59.250	61.125	60.313	1.322
1873	57.875	59.938	59.250	1.298
1874	57.350	59.500	58.313	1.278
1875	55.500	57.625	56.875	1.246
1876	46.750	58.500	52.750	1.156
1877	53.250	58.250	54.813	1.201
1878	49.500	55.250	52.563	1.152
1879	48.875	53.750	51.250	1.123
1880	51.625	52.875	52.250	1.145
1881	50.875	52.875	51.938	1.138
1882	50.000	52.375	51.813	1.136
1883	50.000	51.188	50.625	1.110
1884	49.500	51.375	50.750	1.113
1885	46.875	50.000	48.563	1.065
1886	42.000	47.000	45.375	0.995
1887	43.250	47.125	44.625	0.978
1888	41.625	44.563	42.875	0.940
1889	42.000	44.375	42.688	0.936
1890	43.625	54.625	47.750	1.046
1891	43.500	48.750	45.063	0.988
1892	37.875	43.750	39.813	0.876
1893	30.500	38.750	35.625	0.782
1894	27.000	31.750	28.875	0.635

TABLE 69.

COINAGE, OWNERSHIP, AND CIRCULATION OF SILVER DOLLARS.

Date.	Total Coinage	In the Treasury.		In circulation.
		Held for payment of certificates outstanding.	Held in excess of certificates outstanding.	
1886	244,433,386	100,306,800	82,624,431	61,502,155
1887	277,110,157	160,713,957	53,461,575	62,934,625
1888	309,750,890	229,783,152	20,196,288	59,771,450
1889	343,638,001	277,319,944	6,219,577	60,098,480
1890	380,988,466	308,206,177	7,072,725	65,709,564
1891	409,475,368	321,142,642	26,197,265	62,135,461
1892	416,412,835	324,552,532	30,187,848	61,672,455
1893	419,332,550	325,717,232	34,889,500	58,725,818
1894	421,776,408	331,143,301	34,189,437	56,443,670

It will be noticed that the amount of silver dollars in circulation was lower in 1894 than in any year from 1886 to 1894, inclusive.

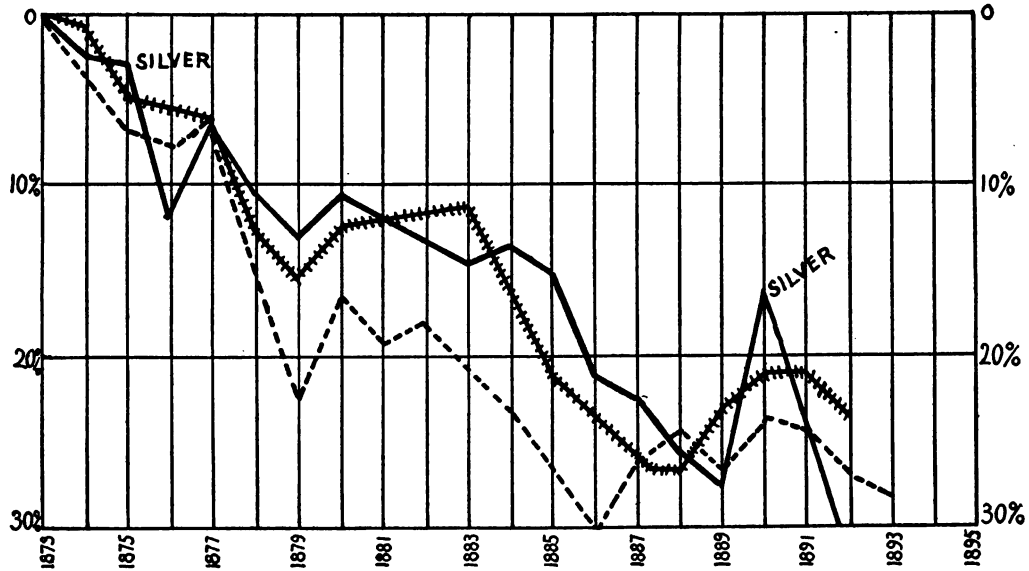
(See Chart No. 12, page 138.)

From the above chart the prices of commodities seem to follow very closely the price of silver. But it is not a fact that the same amount of silver by weight will buy the same article that it would fifty years ago. Silver has been subject to the same influences which have caused other commodities to fall, and has itself in consequence fallen. One vital cause for its fall may be the legislation of 1873. But that does not prove that free coinage to-day will restore silver to its old value. The conditions of the world have wonderfully changed and the amount of silver has greatly increased. The reader must investigate the facts here given on the production of the metals in the past and future and decide for himself what effect the remonetization of silver would have upon silver and gold.

CHART No. 12.

FLUCTUATION IN THE PRICE OF SILVER AND COMMODITIES MEASURED BY GOLD.
PRICES OF 1873 TAKEN AS ZERO.

--------- Economist Index Numbers of Wholesale Prices, 22 Principal Commodities, London Market.
▪▪▪▪▪▪▪▪▪ Soetbeer's Index Numbers of 100 Hamburg Articles and 14 British Exports. ——— Silver.



CHAPTER VII.

CREDIT AND OTHER AIDS TO METALLIC MONEY.

The change in the world about us, the wonderful improvements in all professions and in all industries, have been accompanied by a corresponding change in the mechanism of finance.

Whatever serves the purpose of affecting exchanges in the distribution of the products of industry, practically performs the functions of money and, to that extent, relieves the pressure of demand upon metallic money.

No longer does the ship, plying between nations, carry gold and silver bullion to purchase its cargo; no longer is the great volume of our trade carried on by an actual transmission of metallic money. Our continents ribbed with railroads, the atmosphere webbed with telegraph wires connecting every important commercial center, the girding together of the two hemispheres by cables and ocean greyhounds; has transformed the whole commercial world into one vast clearing-house, whose daily transactions are flashed to all commercial centers—relieving financial tension and adjusting balances by the instantaneous transfers of credits, which a fourth of a century ago would have required weeks, and in many instances months to effect.

The machines which carry on this intricate system of credit are

BANKS AND CLEARING HOUSES.—THEY ARE CONVENIENT. THE BUSINESS WORLD DEMANDS THEM. THEY SAVE THE USE OF METAL AS MONEY.

The earliest banks of which we have any record were merely storehouses for money. A person not wishing to incur the risk of carrying his money about, would put it in one of these banks or storehouses as a place of safe keeping. At any time he desired he could withdraw the very same money that he had placed there, paying a mere nominal toll to the keeper.

Banking was first carried on by individuals. Private lenders established banks in Venice two centuries before the senate opened its first public bank of deposit. Banking was in like manner practiced by individuals in Holland, generations before the city established the famous bank of Amsterdam. English goldsmiths were engaged in a well defined banking business a century before the formation of the Bank of England, which was established in 1694, during the reign of William IV.

From these early and primitive banks, advancing hand in hand with the growing needs and demands of commerce, we have our great banking institutions of to-day, the very life and vitality of the commercial world.

FUNCTIONS OF A BANK.

DEPOSIT, DISCOUNT OR LOAN AND ISSUE.

A bank, says White, is a manufactory of credit and a machine of exchange. The two main functions of a bank are to hold DEPOSITS

and make LOANS on securities. To these functions is often added a third, that of the ISSUING of BANK NOTES.

It is not the purpose of the present Chapter to go into the workings or organization of banks, except in so far as it serves our purpose in explaining the uses of credit and clearings.

One of the simplest forms of transacting business with little or no money, through the use of bank credit, is the following: "Suppose that A, B, and C, all have deposits in the same bank. A owes B $100, B owes C $90, and C owes A $80; now, instead of paying each other the actual cash, each gives the other a check on the bank for the amount of the debt. B takes A's check to the bank and has the sum credited to his account. Against this credit of $100 we have to offset a debit of $90, which B has drawn from his account to pay to C, leaving him $10 better off than he was before. C, in like manner, has a credit of $90, and a debit of $80, while A has a credit of $80 against a debit of $100, representing a reduction of $20 in the value of his deposit. All these transactions can be settled or "cleared" if the bank collects $20 from A and pays $10 each to B and C. Transactions to the amount of $270 would thus be effected with the use of $20 actual cash."

"If A, B and C deal with different banks, the same process of settling debts without the use of money is effected through the agency of a clearinghouse. If A has a deposit in the First National bank, while B has a deposit in the Second National bank, in the same place, A pays B by giving him an order on the First National bank, transferring to that

bank, by endorsement, his title to the check, the bank in the meantime credits him with a corresponding sum on his deposit account. This check was formerly an order from A to the First National bank to pay $100 to the Second National bank. In the course of the day each bank thus accumulates a large number of orders in its favor against other banks in the same place. These orders or credits are all sent to the

CLEARING HOUSE,

WHICH IS A BANK FOR BANKS

and does for the different banks the same work that the bank did for its individual customers in the case previously supposed. Any bank that has an excess of orders in its favor over the orders presented against it, is credited with a surplus; while any bank that has a balance in the other direction is debited with a deficiency. By paying these small differences to the clearing-house the banks can settle their obligations to one another with little or no cash."

"If the accounts, instead of being settled daily, are allowed to go for a week or a month, the proportion of cash payments to checks and clearings becomes exceedingly small."—Hadley.

White, in his Money and Banking, quotes from a recent "census" taken at the First National bank, Chicago, to show the proportions of cash transactions to credit transactions. The following things passed over the counter in a single day:

Gold coin	$9,835
Silver coin	15,826
Gold certificates	98,129
Greenbacks	82,103
Treasury notes	25,496
National bank notes	32,262
Total cash	$269,816

Checks, drafts, bills of exchange, $5,398,945.

Cash transactions, 5 per cent., total credit transactions, 95 per cent.

This is but one case, and when we consult the following tables from the Comptroller of the Currency for 1894 we get some idea of the bank credit of the United States.

Class.	Number doing business July 1, 1894.
National banks	3,755
State banks	4,359
State and Savings banks	5,033
Loan and trust companies	5,838
Private banks	3,858

The total bank fund of all the banks in the United States in 1894 was $6,407,003,338. The estimated population for 1894 was 68,473,000. This makes an average bank circulation of $93.57 per capita.

Let us now briefly state the operations of a bank in the times of a crisis. No matter what the causes may be, if during an expected crisis credit is good and the banks continue to discount and render accommodations "a panic," says Prof. W. A. Scott, "is a physical impossibility." As long as men feel certain that in any event they can go to the bank and get loans on good security, just so long can a panic be warded off. But the moment that banks refuse to discount commercial papers and loan on good security, the element of uncertainty fastens upon business men, a rush follows and a panic ensues.

TABLE 70.

BANKING POWER OF THE WORLD 1889.

(In Millions of £. Muhleman.)

Country.	Capital.	Deposits.	Total.
United Kingdom	£284	£626	£910
France	140	128	268
Germany	85	146	231
Russia	42	64	106
Austria-Hungary	45	102	147
Italy	25	83	108
Spain	31	16	47
Portugal	6	4	10
Sweden	9	15	24
Norway	5	1	6
Denmark	2	21	23
Belgium	11	19	30
Holland	14	6	20
Switzerland	5	12	17
All Europe	704	1,243	1,947
United States	270	760	1,030
Australia	26	108	134
Canada	13	27	40
Cape Colony	2	7	9
Argentine Republic	12	17	29
Uruguay	3	5	8
	£1,030	£2,167	£3,197

The following is quoted from Muhleman:

"The total banking power of Europe is £2,200,000,000, while that of the United States may be placed at one-half that sum, or £1,200,000,000.

TABLE 71.

BANKING POWER OF THE WORLD.

(Muhleman.)

Europe	£2,200,000,000
Asia	150,000,000
Africa	50,000,000
Oceanica	175,000,000
North America	1,200,000,000
South America	140,000,000
Total	£3,915,000,000
Or about	$19,000,000,000

A careful comparison should be made between the credit and banking power, and the volume of money, in the world. We should carefully compare the per capita circulation, banking power and business of commerce of the

different commercial countries. In general, we may safely say that those countries having a low per capita circulation of metallic money, have a great banking power. It seems that the banking power serves the purpose of money and that the people demand it and are satisfied with it. If people were not satisfied with it the system could be overthrown and the per capita of the metallic money in different nations would be more nearly equal.

If two countries have the same business and one of them has a good banking power, we will find that the per capita of metallic money in the latter will be much less than that in the former. But if the banking power of the latter should be destroyed and the business remained the same we should find that the per capita of metallic money would be the same in each country.

The average per capita circulation of Europe is $16. France has the highest per capita of metallic money of any nation in the world. This is no doubt due to the absence of the use of checks and credit instruments and a limited use of bank notes. Coin is used in their stead. In the amount of per capita circulation after France comes Belgium, with $27.58, Netherlands $25.89, Greece $25.50 (chiefly depreciated paper). No other countries of Europe have as much as $20 per capita, and only eight of the remainder have over $15. All but one of the others have under $10. The per capita of metallic money in a country means but little, as some people use more money in transacting business than others. And again, some countries do

more business per capita than others, and still again, some countries have a very desirable and expansive system of credit and banking, which they use in preference to metal.

From the definitions and axioms we know that anything which takes the place of money and performs the functions of the same, or increases the efficiency of metallic money, is as good as an increase of metallic money to that extent.

PANICS.

THE ACTION OF BANKS IN REGARD TO THE SAME.

A bank on the eve of a panic, finding that no money in the shape of deposits is coming in, and that cash is being steadily withdrawn, is reduced to one of two alternatives: First—Either it must continue to discount and loan when its reserve is already low; or Second—It must discontinue its loans and accommodations and precipitate a crisis. One way out of the dilemma is the

COMBINED RESERVE SYSTEM,

(ACCESSIBLE FUNDS FOR BANKS TO DRAW ON) practiced so successfully in New York in times of panics or in a crisis. By this system the specie reserve is combined in the Clearing house and all banks with good paper may draw on this reserve at need. Accordingly no bank needs to discontinue while any other bank has specie. It is stand or fall together. We can readily see what an enormous effect this certainty of bank accommodations has upon credit, and therefore in staving off panics.

PROPORTION OF BUSINESS DONE ON CREDIT IS VERY GREAT.

Authorities estimate and figures show that from 90 to 95% of the world's business is transacted by the means of credit. Says Lyman J. Gage: "Over 95% of our business is done on a credit basis." L. A. Garnett says that "since 1860 credit has increased the efficiency of metallic money 126%." These statements may at first appear improbable, but when we consider the commercial necessity for credit, when we consider, according to Mulhall, that since 1840 the banking of the world has increased elevenfold; that is, three times as fast as commerce and thirty times faster than population, we are struck with the force of the above statement. If to these instrumentalities we add the vast sums represented by Bills of Exchange, Underwritten Risks, International dealings in Funded Securities, Foreign Loan and Speculative Stocks, all of which, to a more or less extent, perform the functions of metallic money in the transfer of credit and liquidation of balances, we have a volume of the various "signs of value" wholly unexampled in the history of the world.

COMPARISON OF CREDIT, CURRENCY AND MERCHANDISE MOVED.

The following table, taken from L. A. Garnett, shows the movement of merchandise, commerce, i. e., the gross imports and exports of Great Britain, France, United States and British India,—aggregating over 40% of the commerce of the world for the four-year periods of 1860 to 1864 and 1886 to 1890, the one period

just preceding, and the other just closing a time of falling prices and industrial depression. This table also shows the movements of treasure for the same period, and its percentage of the merchandise moved as well as the world's production of gold and silver.

TABLE 72.

Periods.	Merchandise moved.	Specie moved.	Percent. of Specie to Merchandise moved.	Gold and Silver Production.
1860-64..	$18 568.736,213	$3,143.656,371	17	$792,350,000
1886-90..	36,004.527,385	2,717,334,788	72	1,284.281.000
Diff'nce.	$17,635,791,172	$426,321,488	9½	$491,941,000

From this table we notice that the increase of merchandise moved was 95%, the decrease of specie was 13%, the decreased percentage of specie to merchandise was 9½%, and the increased production of gold and silver was 62%.

CREDIT ECONOMIZES MONEY. INTERNATIONAL EXCHANGE.

To show now the economizing effect of credit in international exchanges, and to show the increased efficiency of the metals in effecting them, we have but to make a very simple calculation. It will be seen from the foregoing chart that from 1860 to 1864, 17% of the total commerce of these four countries was settled with specie. If the total commerce for the period from 1886 to 1890 had required the same per cent. of specie for its settlement, $6,155,000,000 would have been employed. This is an amount equal to the entire output of gold and silver in the world for the period of thirty-one years, from 1860 to 1891. But we find, however, that only 7½% of the value of merchandise moved, or

$2,717,000,000 specie, was employed, making a saving of $3,438,000,000 in the volume of specie employed. This is equivalent to an increase of 126% in the efficiency of metallic money.

Let us reverse the calculation. At 17% the $2,717,000,000 of specie actually employed in the latter period from 1886 to 1890 would have moved less than $16,000,000,000 of merchandise; whereas, it actually did move over $36,000,000,000 worth, or $20,200,000,000 more than the proportionate amount moved in the first period, from 1860 to 1864. $20,200,000,000 of merchandise was therefore apparently moved without the employment of a single dollar of specie. In other words, to that extent the metals only served the purpose of a standard of value for rating the exchanges which were settled by cross bills and arbitrages, and not by the payment of species or the direct employment of metals. It will be observed that this excess of merchandise moved is, also, equivalent to an increase of 126%, and of itself, is nearly $2,000,000,000 greater than the entire commerce of the countries designated during the first period. We thus have, then, for the period covered by these movements, an actual increase of 62% in the joint production of gold and silver, and 126% in the increased effectiveness of the metals, or 188% in both volume and effectiveness as against 95% increase in commerce and 40% in population.

The work of the clearing houses and banks can be easily understood by a study of the following tables:

TABLE 73.

PERCENTAGE OF CREDIT INSTRUMENTS IN TOTAL RECEIPTS OF NATIONAL BANKS ON VARIOUS DATES.

(Reports of the Comptroller of Currency.)

Cities.	June 30, 1881.	Sept. 17, 1881.	July 1, 1890.	Sept. 17, 1890.	Sept. 15, 1892
New York	98.70	98.80	96.04	95.64	92 36
Chicago	92.00	90.30	95.11	95.06	94.52
Boston	96.50	93.70	94.14	90.70	93.11
Philadelphia	96.00	96.40	96.19	93.48	93.92
Cincinnati	88.00	90.00	92.34	93.50	94.64
Baltimore	92.90	93.90	89.89	89.16	82.46
Pittsburgh	90.40	86.20	92.37	90.00	90.02
Albany	93.80	96.50	92.97	96.60	95.33
Washington	60.0C	45.80	65.27	32.65	66.65
New Orleans	89.80	80.20	90.09	82.83	87.16
Louisville	92.80	83.40	93.55	92.68	91.86
Cleveland	94.00	95.10	93.08	94.74	92.79
Detroit	87.50	93.50	87.31	95.61	91.82
Milwaukee	88.30	94.90	83.25	87.50	90.93
St. Louis	82.30	81.50	89.77	89.59	87.83
San Francisco	91.80	77.40	85.61	91.20	83.39
Reserve cities, except N. Y.	94.38	92.35	93.68	92.27	92.74
Cities other than reserve	81.72	81.74	84.09	82.91	84.91
Whole United States	95.13	94.09	92.50	91.04	90.61

Special attention should be paid to the percentage of credit used in these several National banks, few of them falling below 90% of total transactions.

TABLE 74.

CREDIT INSTRUMENTS IN RETAIL TRANSACTIONS.

(Report of Comptroller of Currency, 1894, p. 19.)

State.	Per Cent. of Money.	Per Cent. of Checks.
Alabama	35	65
Arizona	40.6	59.4
Arkansas	39.7	60.3
California	58.4	41.6
Colorado	29.5	70.5
Connecticut	45.4	54.6
Delaware	46.3	53.7
Florida	34	66
Georgia	29.8	70.2
Idaho	45.7	54.3
Illinois	44.8	55.2
Indiana	54.7	45.3
Iowa	40.6	59.4
Kentucky	46.1	53.9
Kansas	34.3	65.7
Louisiana	33.6	66.4

TABLE 74—Continued.

State.	Per Cent. of Money.	Per Cent. of Checks.
Maine	37.7	62.3
Maryland	41.9	58.1
Massachusetts	50.5	49.5
Michigan	45.1	54.9
Mississippi	13.5	86.5
Minnesota	56.8	43.2
Missouri	35.7	64.3
Montana	27.3	72.7
Nebraska	35.6	64.4
New Hampshire	42.9	57.1
New Jersey	49	51
New Mexico	16.4	83.6
New York	42.5	57.5
North Carolina	50.5	49.5
North Dakota	43.7	56.3
Ohio	54.8	45.2
Oklahoma	39.2	60.8
Oregon	51	49
Pennsylvania	47.9	52.1
Rhode Island	41	59
South Dakota	62.4	37.6
Tennessee	42.9	57.1
Texas	32.5	67.5
Utah	43.7	56.3
Vermont	37.8	62.2
Virginia	25.2	74.8
West Virginia	36	64
Washington	33.2	66.8
Wisconsin	40.5	59.5
Wyoming	56.4	43.6

The above table summarizes the results of an investigation made by the Comptroller of the Currency in 1894. They indicate the relative amounts of cash and credit investments respectively in the deposits in National banks, by retail merchants throughout the United States.

We will notice that the retail trade uses a very high per cent. of credit.

CREDIT REGULATES PRICES AND IS INDEPENDENT OF THE VOLUME OF MONEY.

We have thus far seen the vital importance to commerce of banks and credit. Let us now investigate the relation between credit, prices and the volume of money, and the effect of credit

upon them. The following chart, compiled from The London Economist, the United States Statistical Abstracts, and the Aldrich Senate Report, show the relation of credit, currency and prices in the United States and in Europe.

Says Muhleman: "Credit is the barometer of trade." That is, an increase of credit means an increase of business, and an increase of business means an increase in sales, and an increase in sales means an increase in demand, and an increase in demand means an increase in prices. We notice from Chart No. 13 that this is exactly the case. Here prices follow credit almost exactly. When credit is high prices are high and vice versa. Whereas, on the contrary, we find that credit fluctuates entirely independent of the volume of currency, that is, credit reaches its highest point in 1890, while currency reaches its lowest point in 1890. Thus we see that credit and currency fluctuate independently. Therefore credit must be and is dependent upon something other than currency. It is dependent upon the confidence of the people in the general commercial conditions and in the money standard. There are times when the fluctuations in credit do seem to follow currency, but by a careful investigation of the figures at those times it will be seen that the percentage of increase of each are entirely out of proportion.

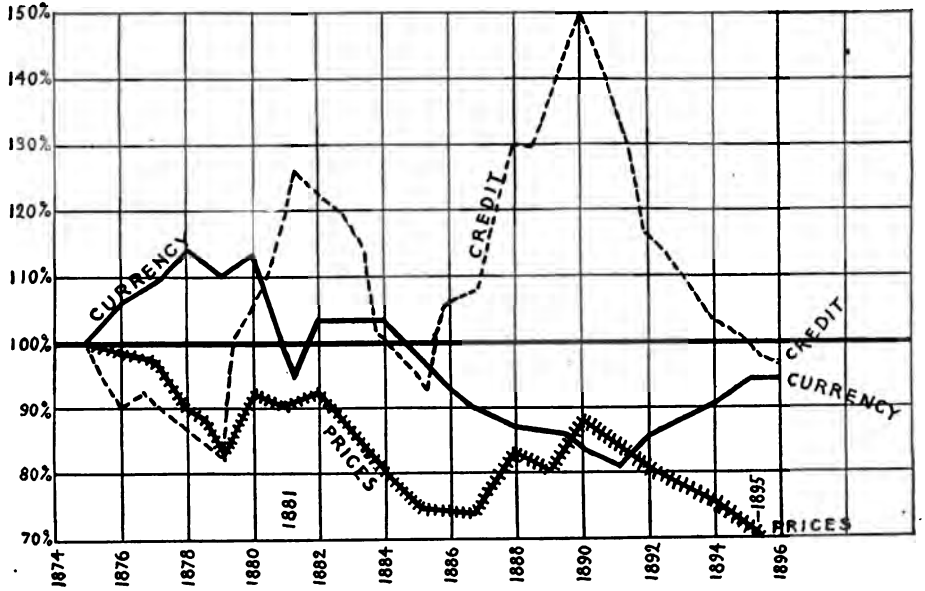
In explanation of Chart No. 14 on the relation of credit, prices, and metallic money, S. McLean Hardy says (Refer to Chart No. 14): "The field chosen for the present investigation is the United States during the years 1861-1892. This

CHART No. 13.

London Clearings, Currency and Prices from 1875 to 1896.

(Compiled from Figures given in London Economist. Given in Per Cent of Increase.)

Currency ——— Prices ····· Clearings ------



period is selected (1) because of its close connection with American economic problems of today; (2) because of the convenience and availability of a certain amount of data bearing upon it; and (3) because the character of the period itself, embracing different and widely varying conditions, throws into clearer relief both the variable and the permanent forces which may be operating within it. The disturbed political and economic conditions show their effects plainly in an analysis of the first part of the period, from the suspension to the resumption of specie payments (1861-1879); while the latter exhibit a more usual, normal condition of the country and of monetary affairs. Therefore it exhibits a consequent increased regularity in the movement of prices. The combination of the two will serve to check hasty or unfounded conclusions drawn from a study of either period taken alone.

The data of prices in the United States (Chart No. 14) are found in a recent investigation by Dr. Falkner. The figures are actual, not average prices. The quotations are obtained directly from wholesale houses, and cover a range of 223 articles, arranged in eight select groups. The figures on the volume of money in circulation are taken from United States Treasury Report.

Turning to the course of prices in Chart No. 14, the line AA shows the movement of general prices for the thirty years from 1861-1892. The result confirms the belief that prices have generally fallen in recent years; but the fall is much less marked than is commonly supposed.

Now as to the relation of volume of currency and prices. Exclusive of the three years from

1862-1865, the volume of money and prices move in exactly opposite directions. From 1865 on, while prices fall, the money in circulation is steadily increasing, and the divergence becomes only more marked after normal conditions are re-established. This seems to be contrary to the fact that high prices and business prosperity are an inevitable result of increasing the amount of currency in a country. It seems that according to the quantity theory, either the amount of currency should have comparatively decreased, or prices should have comparatively risen. But neither of these events has taken place. For twenty-seven years out of the thirty there is no relation apparent between the quantity of money in circulation and prices.

The quantity theory, if operative at all, has been overbalanced or checked by other stronger force or forces. Some disturbing causes have intervened to produce effects for which the quantity theory can give no explanation, and for the understanding of which it is wholly irrelevant. The most important place where some connection might be claimed between the two lines is the war period of extraordinary paper issues, 1861-1865, when both prices and volume of currency rose at a rapid rate. This is easily explained by the fact that the United States had a great demand for production and therefore caused a rise in prices. But leaving this consideration out of the question, the connection between prices and currency is by no means close or casual. The amount of increase differs; in the four years prices rise 166.3%, while currency rose 59.-4%. The rate of rise in the two lines is also

CHART No. 14.

United States Clearing House Transactions or Credit,

(Statistical Abstract, Muhleman and

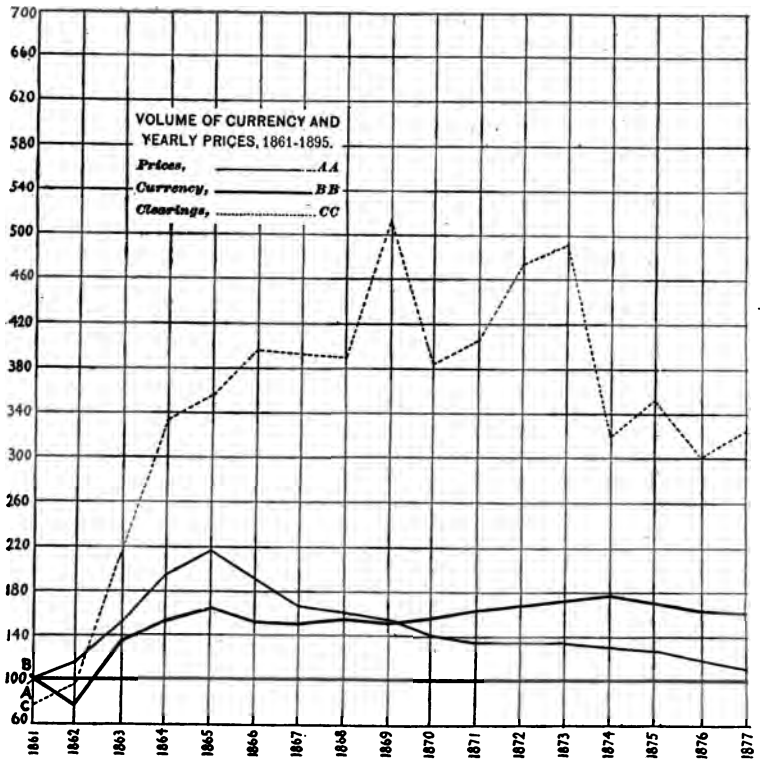
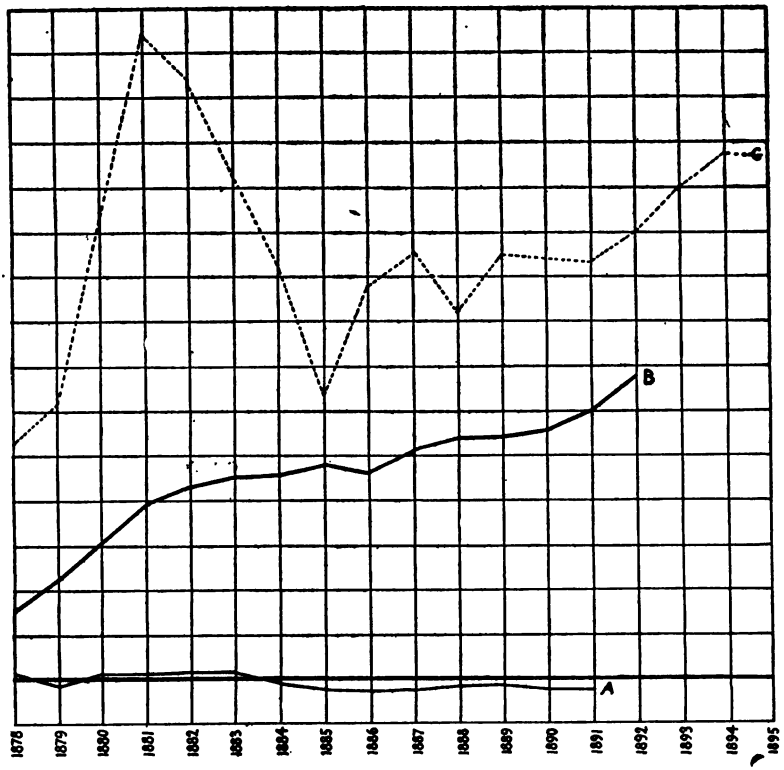


CHART No. 14.—CONTINUED.

COMPARED WITH UNITED STATES CURRENCY AND PRICES.

Aldrich, Committee Report.)



very different. Prices rise rapidly on approaching the year 1865, while the increase in currency noticeably slackens. These facts point out clearly the difference between the two lines.

There is still another line on that Chart which commands notice. It is the line indicating the transactions of the Clearing House. Special attention should be given to the relation of this line to the price line. A direct connection between the two will be easily perceived. This is not at all strange when we consider the vast amount of credit and clearings in use in the United States.

Chart No. 14 is not as representative as Chart No. 13, owing to its being taken from a less representative market, and also to abnormal conditions in the United States during the '60's and to the uncertainty of our tariff and financial legislation. Yet even here we notice that credit fluctuates independently of the volume of money. In 1869 the volume of credit was about $520,000,000, currency was only $150,000,000. In 1876 credit was $300,000,000 while currency was only $170,000,000. In 1881 credit was $670,000,000 and currency was $255,000,000. By a comparison of these figures it will be noticed that the proportion of credit to the volume of currency for these several periods is not very uniform. This conclusively shows that credit fluctuates independently of the volume of currency, and must, as the only remaining element, be dependent upon the confidence of the people and the stability of the money standard.

The annual transactions of the London and United States Clearing Houses from 1878 and 1895 were as follows:

TABLE 75.

TOTAL ANNUAL TRANSACTIONS OF THE LONDON CLEARING HOUSE 1878 TO 1895.

(MUHLEMAN.)

(Estimated at $5 per £. In Millions.)

1878	$24,960	1887	$30,385
1879	24 425	1888	34,510
1880	28,970	1889	38,095
1881	31,785	1890	39,005
1882	31,105	1891	34,235
1883	29,645	1892	32,405
1884	28,990	1893	32,330
1885	27.555	1894	31,685
1886	29,510		

TABLE 76.

TOTAL ANNUAL EXCHANGES OF THE CLEARING HOUSES OF THE UNITED STATES FROM 1878 TO 1895.

(MUHLEMAN.)

	In Millions.		In Millions.
1878	$27,814	1887	$51,147
1879	38.526	1888	49,541
1880	49,990	1889	56,175
1881	63,471	1890	60,829
1882	60,878	1891	56,947
1883	51,731	1892	62,109
1884	44,200	1893	54,309
1885	41,474	1894	45,615
1886	49,294		

(See also Table 77, pages 160, 161.)

It will be noticed that these tables are quoted from Statistician Muhleman, while the charts on clearings are taken from The London Economist, and the United States Statistical Abstract.

DISTURBED CREDIT MEANS PANICS—ENGLAND A CREDITOR NATION.

In the present chapter we have seen that credit is the life and vitality of our commercial world. We have seen that because of its convenience the business world demands it and that it relieves

TABLE 77.

Transactions of the New York Clearing House for Forty-two Years.

(Report of the Comptroller of the Currency, 1894, p. 296.)

Year.	No. of Banks.	Capital.	Clearings.	Average Daily Clearings.
1854	50	$47,044,900	$5,750,455,987	$19,104,505
1855	48	48,884,180	5,262,912,098	17,412,052
1856	50	52,883,700	6,906,213,328	22,278,108
1857	50	64,420,200	8,333,226,718	26,968,371
1858	46	67,146,018	4,756,664,386	15,393,736
1859	47	67,921,714	6,448,005,956	20,867,333
1860	50	69,907,435	7,231,143,057	23,401,757
1861	50	68,900,605	5,915,742,758	19,269,520
1862	50	68,375,820	6,871,443,591	22,237,682
1863	50	68,972,508	14,867,597,849	48,428,657
1864	49	68,586,763	24,097,106,656	77,984,455
1865	55	80,363,013	26,032,384,342	84,796,040
1866	58	82,370,200	28,717,146,914	93,541,195
1867	58	81,770,200	28,675,159,472	93,101,167
1868	59	82,270,200	28,484,288,637	92,182,164
1869	59	82,720,200	37,407,028,987	121,451,393
1870	61	83,620,200	27,804,539,406	90,274,479
1871	62	84,420,200	29,300,986,682	95,133,074
1872	61	84,420,200	33,844,369,568	109,884,317
1873	59	83,370,200	35,461,052,826	115,885,794
1874	59	81,635,200	22,855,927,636	74,692,574
1875	59	80,435,200	25,061,237,902	81,899,470
1876	59	81,731,200	21,597,274,247	70,349,428
1877	58	71,085,200	23,289,243,701	76,358,176
1878	57	63,611,500	22,508,438,442	73,555,988
1879	59	60,800,200	25,178,770,691	82,015,540
1880	57	60,475,200	37,182,128,621	121,510,224
1881	60	61,162,700	48,565,818,212	159,232,191
1882	61	60,962,700	46,552,846,161	151,637,935
1883	63	61,162,700	40,293,165,258	132,543,307
1884	61	60,412,700	34,093,037,338	111,048,982
1885	64	58,612,700	25,250,791,440	82,789,480
1886	63	59,312,700	33,374,682,216	109,067,589
1887	64	60,862,700	34,872,848,786	114,337,209
1888	63	60,762,700	30,863,686,609	101,192,415
1889	63	60,762,700	34,796,465,529	114,839,820
1890	64	60,812,700	37,660,686,572	123,074,139
1891	63	60,772,700	34,053,698,770	111,651,471
1892	64	60,422,700	36,279,905,236	118,561,782
1893	64	60,922,700	34,421,380,870	113,978,082
1894	65	61,622,700	24,230,145,368	79,704,426
1895	66	61,122,700	28,264,379,126	92,670,095

TABLE 77—Continued.

Year.	Balances paid in Money.	Average Daily Balances Paid in Money.	Bal. Pd. Cl'g H. Metallic Money Used. Per ct.
1854	$297,411,494	$988,078	5.2
1855	289,694,137	940,565	5.4
1856	334,714,489	1,079,724	4.8
1857	365,313,902	1,182,246	4.4
1858	314,238,911	1,016,954	6.6
1859	363,984,683	1,177,944	5.6
1860	380,693,438	1,232,018	5.3
1861	353,383,944	1,151,088	6.0
1862	415,530,331	1,344,758	6.0
1863	677,626,483	2,207,252	4.6
1864	885,719,205	2,866,405	3.7
1865	1,035,765,108	3,373,828	4.0
1866	1,066,135,106	3,472,753	3.7
1867	1,144,963,451	3,717,414	4.0
1868	1,125,455,237	3,642,250	4.0
1869	1,120,318,308	3,637,397	3.0
1870	1,036,484,822	3,865,210	3.7
1871	1,209,721,029	3,927,666	4.1
1872	1,428,582,707	4,636,632	4.2
1873	1,474,508,025	4,818,654	4.1
1874	1,286,753,176	4,205,076	5.7
1875	1,408,608,777	4,603,297	5.6
1876	1,295,042,029	4,218,378	5.9
1877	1,373,996,302	4,504,906	5.9
1878	1,307,843,857	4,274,000	5.8
1879	1,400,111,063	4,560,622	5.6
1880	1,516,538,631	4,956,009	4.1
1881	1,776,018,162	5,823,010	3.5
1882	1,595,000,245	5,195,440	3.4
1883	1,568,983,196	5,161,129	3.9
1884	1,524,930,994	4,967,202	4.5
1885	1,295,355,252	4,247,069	5.1
1886	1,519,565,385	4,965,900	4.5
1887	1,569,626,325	5,146,316	4.5
1888	1,570,198,528	5,148,192	5.1
1889	1,757,637,473	5,800,784	5.0
1890	1,753,040,145	5,728,889	4.7
1891	1,584,635,500	5,195,526	4.6
1892	1,861,500,575	6,083,335	5.1
1893	1,696,207,176	5,616,580	4.9
1894	1,585,241,634	5,204,671	6.5
1895	1,896,574,349	6,208,276	6.7

Special attention should be paid to the last column, the per cent. of metallic money used and paid out by clearing houses. The figures on the number of the banks should also be studied.

the pressure upon our metallic money by transacting 95% of the world's business. The quoted figures show that the fluctuations of credit, based upon the confidence of the people, are disproportionate to the fluctuations in currency.

That the people have confidence in the stability of gold as a basis of credit, is evinced by a century of experience and the condition of credit in the gold standard countries of to-day. England's supremacy as a creditor nation and her position as the bank and clearing house of the world is due to the stability of her gold monetary standard which has been untampered with since 1816. Says Paul LeRoy Bealeau: "Many Europeans of to-day hold a large part of their wealth in the shape of the English pound because of their confidence in the stability of the English monetary system. They feel assured from past experience that England will not indiscriminately tamper with and change her monetary standard, and that when the time comes she will pay gold sovereign for gold sovereign. These sovereigns will be worth their face value in every nation on the globe."

Before the United States can hope to attain such an exalted position, she must prove to the world by years of experience, that the monetary standard which has brought England to her great supremacy will be untampered with and will be adhered to despite the cry of the discontented classes. Our credit system can never be stable until the United States invites the confidence of the world, as England has done, by adhering unalterably to the gold standard, which alone possesses the unlimited confidence of every nation on earth; and which in the past has so

faithfully formed a stable basis for credit. All of our attempts to bolster up silver have caused us national sorrowing and disaster. At best the results of favorable silver legislation would be uncertain, and as experience has so clearly shown it is not the nature of business men to do business on uncertainties.

LESSON FOR THE UNITED STATES.

The United States should have learned from her failure to rehabilitate silver at all monetary conferences, and from the determined stand that nations are taking to-day in regard to finance, that to attempt to place the United States on a silver basis means death to our credit, and therefore financial and commercial ruin. That the present agitation is greatly affecting our credit, is shown by the fact that banks are becoming conservative, and that our notes and contracts are being made payable in gold. As the disturbance of credit touches the welfare of every citizen any attempt to destroy the standard upon which it is based should be looked upon with fear and distrust.

CHAPTER VIII.

TABLE OF IMPORTANT MONETARY EVENTS.

1774—England passed an act limiting the legal tender of silver coin to 25 pounds. All debts above that amount could be paid in silver by weight at its commercial value.

1785—France orders a re-coinage of her gold and places the ratio at 15½ to 1.

1786—Spain fixes the ratio for the coinage of silver at 16 to 1.

1791—First bank of the United States established with capital of $10,000,000, divided into shares of $400 each. $2,000,000 of stock subscribed by the government, $8,000,000 to be subscribed by the public. Bank notes could be issued to an amount equal to the capital stock, but notes equal to only one-half the capital stock were so issued. These notes were receivable for all government dues. The main bank was located at Philadelphia with branches at New York, Boston, Baltimore, Norfolk, Charleston, Savannah, Washington and New Orleans. The bank charter was to expire in 1811.

1792—April 2, by act of Congress the monetary system of the United States was established, the ratio between gold and silver being fixed 15 to 1.

Hamilton's Report to Congress on this Act:

"Upon the whole the secretary is strongly inclined to the opinion that a preference

ought to be given to neither of the metals for the monetary unit. * * * Because this cannot be done effectually without destroying the office and character of one of them as money and reducing it to the situation of mere merchandise, which accordingly, at different times, has been proposed from different and very reputable quarters, but which would probably be a greater evil than occasional variations in the unit, from the fluctuations in the relative value of the metals, especially if care be taken to regulate the proportion between them with an eye to commercial value. To annul the use of either of the metals as money is to abridge the quantity of circulating medium."

1803—France declares the silver five-franc piece, weight 5 grams, of nine-tenths fineness, to be the standard. Gold pieces of 20 and 40 grains issued at a ratio of 15½ to 1. The decimal system adopted in the denomination of money.

1810—Russia adopts the silver standard limited coinage of gold at a ratio of 15 to 1.

1816—Second bank of the United States chartered. The charter provided for a capital of $35,000,000 of which the United States was to subscribe one-fifth.

1816—Netherlands: (Belgium and Holland) under William I, adopted bi-metalism at a ratio of 15.873 to 1.

1816—England adopts the gold standard.

1817—Russia changed the coinage ratio from 15 to 1, to 15.45 to 1.

1819—England abolished the forced circulation of paper money.

1825—Monetary crisis in England.

1832—Belgium adopts the French monetary system.

1834—July 31, by act of Congress, the ratio between silver and gold was changed from 15 to 1, to 16 to 1. This was done by reducing the weight of fine gold in the dollar from 24.75 grains to 23.20 grains.

1837—Act of Congress, reducing weight of silver dollar from 416 to 412½ grains, standard nine-tenths fineness. Gold dollar to contain 23.22 grains of fine gold.

1837—Industrial and financial panic. New York banks suspend and are followed by all the leading banks of the country. All the Massachusetts banks suspend specie payments for one year; all but 11 resume in 1838.

1841—Second bank of the United States suspends, and is discontinued, the charter having expired.

1844—Turkey adopts the double standard at a ratio of 15.10 to 1.

1847—Discovery of gold in California. Starting of gold era.

1847—Holland adopts the single silver standard.

1848—Coinage of 10 and 25 franc pieces at ratio of 15.83 to 1.

1848—Spain, which for 62 years had a coinage ratio of 16 to 1, changes to the ratio of 15.77 to 1.

1850—Holland calls in her gold coin and it is sold by the government at a loss of more than one million florins.

1850—Switzerland adopts the French monetary system.

1851—Discovery of gold in Australia.

1853—Act of Congress whereby the amount of silver in the small coins, from half-dollar downwards, was reduced. It also provided that they should be coined only on government account and were made legal tender for all purposes up to the sum of five dollars. Dunham, who piloted the bill through the House said: "We have had but a single standard for the last three or four years; that has been and now is gold. We propose to let it remain so and adapt silver to it, to regulate it (silver), by it (gold).

1854—Portugal adopts the single gold standard.

1854—Spain changes the coinage ratio from 15.77 to 1, to 15.48 to 1.

1854—Java adopts the single silver standard.

1857—Germany and Austria adopt the single silver standard at the Vienna Conference.

1857—McCulloch, Comptroller of the Currency: "Financial panic. All the eastern banks, except the Chemical Bank of New York, and all the Western banks, except the banks of Kentucky and The Bank of Indiana, suspend specie payments."

1860—January 31. Switzerland adopts the 5 franc piece as the UNIT and lowers the fineness of her small coins .800.

1861—June 4. Belgium begins the coinage of gold according to the French system.

1861—December 31. Suspension of specie payments by banks in the United States.

1862—February 25. Bill passed by Congress for the issue of Treasury Notes (Greenbacks) to the amount of $150,000,000. June 7. Chase, Secretary of the Treasury, asks for $150,000,000 more notes. Granted by Congress.

1862—August. 24. Italy adopts the French monetary system.

1863—January 13. Joint Resolution of Congress authorizing the issue of $100,000,000 of United States Notes.

1863—February 25. National Banking law enacted.

1865—France, Italy, Belgium and Switzerland met in convention at Paris and instituted what is known as The Latin Monetary Union, which came into force in 1869, adopting the monetary system of France and agreeing to maintain the league for at least 15 years.

1867—April 14. Roumania adopts the French monetary system, with the exception of the 5 franc piece.

1867—Admission of Greece to The Latin Monetary Union.

1868—October 19. Spain adopts the French monetary system.

1871—Double standard established in Japan at a ratio of 16.11 to 1. The YEN (equal to 99.7 cents in our money) was made the unit. This was coined in both gold and silver, the yen of gold containing 25.72 grains, and the yen of silver containing 416 grains.

1871—Germany adopts the gold standard and makes silver the subsidiary coin at a ratio of $15\frac{1}{2}$ to 1.

1873—Formation of the Scandinavian Mone-

tary Union between Denmark, Norway, and Sweden. The gold standard adopted. Union formed and coinage established in pursuance of the treaties of October 18, 1872, and May 27, 1873.

1873—White, Money and Banking: "Silver demonetized by Germany. Silver coins, except the THALER, withdrawn from circulation. The government was empowered to withdraw the Thalers also, but has not seen fit to do so."

1873—February 25. Act of Congress revising the coinage laws. The silver dollar was omitted from the list of coins, and provision was made for the coinage of the Trade dollar, the weight of which should be 420 grains Troy. Under this act there were coined Trade dollars to the amount of $35,965,924 (Muhleman). All silver coin, including this Trade dollar, was declared full legal tender to the amount of five dollars.

1873—December 18. Suspension of standard silver coinage in Belgium. Silver coinage had been limited during the same year, previous to the suspension.

1873—December 26. Suspension of silver coinage in Holland.

1874—January 30. The Latin Monetary Union (France, Italy, Belgium and Switzerland) limit the coinage of silver to 120,000,000 francs per year, for all the countries concerned. This was virtually the adoption of the gold standard.

1875—January 14. Act of Congress authorizing the resumption of specie payments on and after January 1, 1879. This act also

authorized the Secretary of the Treasury to sell certain bonds to obtain the necssary coin for the resumption of specie payments.

1876—France suspends the coinage of silver.

1876—July 22. Joint Resolution of Congress taking away the legal tender quality of the Trade dollar.

1876—August 20. Free coinage of silver suspended by Spain.

1877—Gold standard adopted by Finland.

1878—February 28. Bland-Allison Bill enacted. It provided that the government should buy and coin into silver dollars, not less than $2,000,000 nor more than $4,000,000 worth of silver bullion each month. These dollars were to be full legal tender money. It also authorized the holder of these dollars to deposit them in the United States treasury and receive silver certificates for the same.

1878—August 16. International Monetary Conference met at Paris. United States and all the greater powers of Europe, except Germany, represented. The delegates of all the countries, except Italy and the United States, who dissented, joined in the following conclusions:

Report of United States Commissioners to Congress:

1. "That it is necessary to maintain in the world the monetary functions of both gold and silver, but that the selection of one or the other, or both, should be governed by each state or group of states."

2. "That the question of the restriction of

the coinage of silver should be left to each state or group of states."

3. "That that difference of opinion exclude the discussion of the adoption of a common ratio between gold and silver."

1878—November 5. The Latin Monetary Union continued by mutual agreement until 1886. The coinage of all silver except subsidiary coins suspended.

1879—January 1. Resumption of specie payments. The Secretary of the Treasury had $135,000,000 of gold coin and bullion, and some over $32,000,000 of silver coin and bullion, for this purpose.

1881—April 19. Second International Monetary Conference met at Paris at the invitation of France and the United States. No definite action was taken. The conference adjourned to meet again in April, 1882, but in fact never re-assembled.

1885—Egypt adopts the gold standard.

1885—November 6. The Latin Monetary Union continued until 1891, with the privilege of tacit continuance from then on.

1890—July 14. Sherman Act passed by Congress. It provided that the Secretary of the Treasury should buy 4,500,000 ounces of silver at the market value, and pay for the same in Treasury Notes, redeemable in gold or silver coin. These Treasury Notes declared to be "legal tender in payment for all debts, public or private, except where otherwise expressly stipulated in the contract."

1892—November 22. International Monetary Conference met at Brussels at the invitation of the United States. (Report of United

States Commissioners to Congress:) "to consider the present condition of silver and what measures, if any, could be taken to increase the use of that metal in the currency systems of the world." United States submitted a proposition for International Bimetalism, but no definite action was taken. Conference adjourned December 17, 1892, to re-convene May 30, 1893, but it never reassembled.

1893—June 26. Shaw, History of Currency: "The Mint of India closed to the free coinage of silver."

1893—November 1. The Sherman Act repealed by Congress.

1894—The gold standard adopted by Chili.

1896—July. Corsica adopts a gold basis.

CHAPTER IX.

HISTORY AND EFFECT OF MONETARY LEGISLATION.

Before the adoption of the Constitution the medium of exchange of the United States consisted virtually of foreign coins, mostly silver, and was regulated by the governments which issued them. The "Spanish Milled Dollar" was the unit most used in their system of account. Next in order came the English coins, doubtless because of the English origin of the colonies. During the Revolution paper money was issued by the Continental Congress which, it was expected, would be redeemed in coin. After the Revolutionary War, until the adoption of the Constitution, the dollar as then known was the unit established by law, but nothing went into effect before the adoption of the Constitution, therefore the first legislation in the United States of any lasting effect was the act of 1792 for the "Establishment of a Mint." By this act the ratio of coinage of gold and silver was placed at 1 to 15.

THE MONEY UNIT.

Considerable discussion has been indulged in during the present silver agitation as to what metal was used in establishing the unit of value. It is claimed by the advocates of the free coinage of silver that the unit, as determined upon, was the silver Spanish milled dollar, and that therefore silver became the standard unit of coinage in the United States. An examination of Hamil-

ton's Report to Congress, which was the basis for the Act, will reveal the fact that such at least was not the intention of the Secretary. His whole object was to secure a metallic medium in abundance. Silver being almost exclusively the metal then in use, a double standard would serve to keep it in circulation, and also to add gold to the money already in use. It would seem that if Hamilton intended to have either of the metals as a standard, his preference was gold.

In speaking of the coins then current in the United States he says:

"That species of coin (Spanish dollars) has never had any settled or standard value, according to weight or fineness, but has been permitted to circulate by *tale*, without regard to either, very much as a mere money of convenience, while gold has a fixed price by weight with an eye to its fineness. This greater stability of the value of gold coins is an argument of force for regarding the money unit as having been hitherto virtually attached to gold rather than to silver."

The futility of arguing that either metal was determined upon as a unit can have no important bearing upon the controversy of to-day. It is clear that a double standard was intended, and the unit was probably determined AFTER the ratio had been decided upon; then it would be only natural that the unit most familiar to the people should be adopted, and that was the DOLLAR, not the SILVER dollar, nor the GOLD dollar, but the DOLLAR as used in the system of account by means of which the people balanced their accounts, reckoned their debits and credits.

THE RATIO BETWEEN GOLD AND SILVER DETERMINED.

In selecting the ratio, Hamilton took the market ratio as it was then in the United States. This was approximately 15 to 1. It happened that this ratio was as near to the market ratio of the commercial world as could have then been determined. Therefore it cannot be contended that the result, as disclosed by the future, was caused by the selection of a wrong ratio. The amount of silver in the new dollar was 371¼ grains of fine silver. The new Spanish milled dollar contained 373¾ grains. This difference at once offered an opportunity for GRESHAM'S LAW to operate, and the American dollars began to leave the country while the new Spanish dollars were imported and re-coined at our mint.

COINAGE OF SILVER DOLLARS STOPPED.

To put an end to this, President Jefferson in 1806 gave an order to the Mint to stop coining dollars, and no more dollars were coined until 1836. But the half-dollars and quarters went out of the country the same as the dollars had, and our circulation was filled with abraded Spanish silver coin. The market ratio had in the course of time changed, so that by 1836 it was about as 15.625 to 1, and at that time we were practically on a silver basis. The premium on gold was about 4½ per cent. This resulted in every one having say $100 in gold buying $104 of silver to pay his debts with; in other words, Gresham's Law continued to operate, and the cheaper money—silver money—remained in circulation.

THE RATIO CHANGED.

In 1834 Congress set out to remedy this evil.

If there could be a premium on silver established the reverse would happen, gold would flow into the country. So the ratio was changed by the act of 1834 and again by the act of 1837, so as to be approximately as 16 to 1. This was accomplished by reducing the weight of fine gold in the gold dollar.

First it was fixed at 23.2 grains and then in 1837 at 23.22. The amount of fine silver in the silver dollar was not changed, but by the act of 1837 the standard fineness was made 9-10 by reducing the standard weight from 416 grains to 412½ grains.

Why did Congress change the gold coins and not the silver coins? There was no gold in the country, therefore it would be less expensive to change the gold coinage than to call in and recoin the silver. This seems to be a good, practical reason; there would then be no disturbance of commerce or finance; silver would continue to serve in exchange and only gradually be changed for gold.

Under the new law of coinage, the ratio being lower than the market ratio, a premium on silver was established. Any one having $100 in silver could buy $102.25 in gold to pay his debts with. The result was that all the silver left the country and by 1853 the United States was on a gold basis. The legislation of 1853 was simply to give effect to the conditions then existing and to regulate our coinage to the gold standard. This was the intention of Congress in passing the coinage law of 1853. Dunham, who piloted the bill through the House, said: "We have had but a single standard for the last three or four years; that has been and now is gold. We propose to

let it remain so and adapt silver to it, to regulate it (silver) by it (gold)." It was absolutely necessary that the smaller silver coins, from the half dollar downwards, should be kept in circulation for convenience in exchange, especially in the retail trade. Recognizing the law of money, that cheap or debased currency would remain in the country, Congress reduced the amount of fine silver in the subsidiary coins so that the silver coins coined under that law were about 8% lighter than the old coins. The price of silver had risen simultaneously with the great outpour of gold just after the discoveries in California, and therefore the full-weighted silver coins would continue to go out of the country if the ratio were not reduced so as to equalize the difference in the market ratio and legal ratio. So it was thought perfectly safe to reduce the weight of the smaller coins, and as a further security for keeping them in the circulation, their legal tender power was limited to five dollars.

"COIN CHART BOOK."

The only silver in the United States at this time was a lot of abraded and light-weighted foreign coins, and every merchant kept a coin chart for handy reference to determine the value of these foreign coins as they were offered in trade. From the first establishment of the Mint in 1792 up to 1853 there had been no less than ten acts passed by Congress regulating the legal tender value of foreign coins. The coin chart books used by merchants was a compilation from the statutes regulating their value.

EFFECT OF ACT OF 1792.

The number of silver dollars coined under

the act of 1792 was 1,439,517, all coined before 1806, and exported in exchange for the heavier Spanish dollars, which later were re-coined and exported in exchange for gold. But the abraded and light-weighted coins remained in circulation because their intrinsic value was below their legal tender power. The law of 1853, had it intended to keep the silver dollar in circulation then on the same principle that it proposed to keep the smaller coins, it should have reduced their weight also. But this was not done. The silver dollar was not disturbed, and had free coinage and full legal tender power. By looking at the Mint reports it will be seen that the coinage of silver dollars was very small as compared to the coinage of half and quarter dollars. There was no demand for their coinage so long as it was more profitable to sell it as bullion.

EXCHANGE DURING CIVIL WAR—SPECIE PAYMENTS SUSPENDED—PAPER MONEY—EFFECT.

During the Civil war specie payments were suspended and the great bulk of the money of the country consisted of United States Notes, National Bank Notes and other forms of bank notes, issued by what were called Free banks. It will be interesting to notice right here how the value of this paper money was determined. Very soon after the issue it appears that a premium was demanded whenever it was sought to exchange them for gold. This was equivalent to finding the value of paper money in gold, and prices were regulated accordingly. This goes to show that the people accepted gold as the standard of value long before the act of 1873, the only difference being that it was

reckoned in greenbacks as a medium of account between gold and commodities. The history of the "greenbacks" and our legal tender legislation seems to show that the money of the people must have intrinsic value, often called "primary money," and that whenever representative money is forced into circulation its value will be determined by that commodity which has the greatest stability of value.

ACT OF FEB. 12, 1873—GOLD FORMALLY ADOPTED.

The next legislation in regard to the Mints and coinage was the act of February 12, 1873. It will not be necessary for the purposes of this volume to consider all the various provisions of this act, therefore it will be confined to those sections which relate to the coinage. This law provides for the coinage of the various gold coins at the standard fineness, and declares the GOLD DOLLAR to be the UNIT OF VALUE. These gold coins are made legal tender for all amounts. Section 15 describes the silver coins and their legal tender value. In the list of silver coins the silver dollar is left out, and in its place is substituted the "trade dollar," to be of 420 grains standard weight, which was 7½ grains more than the previously coined silver dollar. The legal tender of the silver coins was limited to five dollars in any one payment. This act demonetized silver coins of all forms.

ATTRACTED LITTLE ATTENTION.

At the time of the passage of the act it did not attract much attention from the public in general, nor for some time afterwards, until about 1876, when silver had fallen in value as

compared with gold and the silver men began to agitate the free coinage of silver. The charge was then made that it was PASSED SECRETLY. From this fact the act has become generally known as the "crime of '73." This charge can be easily disproved by an examination of the records of Congress. Every bill in Congress must be printed and read in each branch of Congress, and the proceedings are at all times open to the public. The LAW-MAKING of our country is as PUBLIC as any deliberative assembly can possibly make it. The proceedings are entirely incompatible with secrecy. This bill was printed thirteen times by the Treasury Department and Congress, and the proceedings occupy 144 columns of The Congressional Globe, which was published daily during the session.

The following table, prepared by Prof. Laughlin, shows the proceedings on this bill in Congress (Laughlin's "Bimetallism," page 98):

	SENATE.	HOUSE.
Submitted by the Secretary of the Treasury,	Apr. 25, '70	
Referred to the Senate Finance Committee	Apr. 28, '70	
Five hundred copies printed	May 2, '70	
Submitted to House		June 25, '70
Reported, amended and ordered printed	Dec. 19, '70	
Debated	Jan. 9, '71	
Passed by vote of 36 to 14	Jan. 10, '71	
Senate bill ordered printed		Jan. 13, '71
Bill reported with substitute and recommitted		Feb. 25, '71
Original bill re-introduced and printed		Mar. 9, '71
Reported and debated		Jan. 9, '72
Re-committed		Jan. 10, '72
Reported back, amended and printed		Feb. 13, '72
Debated		Apr. 9, '72
Amended and passed by vote of 110 to 13		May 27, '72
Printed in the Senate	May 29, '72	
Reported, amended and printed	Dec. 16, '72	
Reported, amended and printed	Jan. 7, '73	
Passed by Senate	Jan. 17, '73	
Printed with amendments, Conference Committee appointed		Jan. 21, '73
Became a law Feb. 12, 1873.		

It will be seen from the above table that the

bill was before Congress from April 25, 1870, to January 21, 1873, or a little more than two years and ten months. If it can be said that this bill was passed secretly, how long must a bill be before Congress before it can be said to have been passed openly? Moreover, it can be shown that the demonetization of silver was not done silently, or without due consideration, as is claimed was done by dropping the dollar from the list, and this omission not being noticed. Below we submit for comparison the silver clause in the bill as it was first passed by the House (May 27, 1872), and as it was finally approved February 12, 1873.

AS PASSED BY THE HOUSE, MAY 27, 1872.

"That the silver coins of the United States shall be a dollar, a half-dollar or fifty-cent piece, a quarter-dollar or twenty-five cent piece, a dime or ten-cent piece; and the weight of the dollar shall be 384 grains; the half-dollar, quarter-dollar and dime shall be respectively one-half, one-quarter and one-tenth of the weight of said dollar, which coins shall be a legal tender for their nominal value for any amount not exceeding five dollars in any one payment."

AS FINALLY APPROVED, FEB. 12, 1873.

"That the silver coins of the United States shall be a trade dollar, a half-dollar or fifty-cent piece, a quarter-dollar or twenty-five-cent piece, a dime or ten-cent piece; and the weight of the trade dollar shall be 420 grains troy; the weight of the half dollar shall be twelve grams and one-half of a gram; the quarter-dollar and the dime shall be respectively one-half and one-fifth of

the weight of said half dollar; and said coins shall be a legal tender at their nominal value for any amount not exceeding five dollars in any one payment."

It will be noticed that in the first passage the bill provided for the coinage of a silver dollar at a weight of 384 grains, which was exactly twice the half-dollar as coined under the act of 1853, which was there fixed at 192 grains. The standard dollar was 412½ grains. The intention, then, was to make the silver dollar subsidiary money, like the half-dollars and quarters. The legal tender quality is also limited in the first passage. How can the intention to demonetize be more clearly expressed? In its final passage the bill contains a "trade dollar", a clause placing its weight at 420 grains and a clause giving the weight of the half-dollars, quarters and dimes. To say that such changes could have been made unnoticed, is to assume that the representatives of the American people are far below the average intelligence.

In the section defining the gold coins, a clause is found which says that the gold dollar piece of the standard weight of 25.8 grains "shall be the unit of value." This at least was an open and deliberate statement of the intention to establish the gold standard.

ATTENTION CALLED TO CHANGE—DEBATE ON.

But attention was called to the changes, and the gold unit in other ways. The bill coming up for consideration in the regular order of business April 9, 1872, Mr. Hooper, of Massachusetts, said: "Section 14 declares what the gold coins shall be and their respective weights, and

makes them a legal tender in all payments at their nominal value, when not below the standard weight and limit of tolerance prescribed, and at a valuation proportioned to their actual weight when below the standard weight and tolerance. Thus far the section is a re-enactment of the existing laws. In addition it declares the gold dollar of 25.8 grains of standard gold, to be the unit of value, gold practically having been in this country for many years the standard or measure of value, as it is legally in Great Britain and most European countries. * * * * * The committee, after careful consideration, concluded that 25.8 grains of standard gold constituting the gold dollar should be declared the money unit or metallic representative of the dollar of account." Congressional Globe, 42nd Congress, page 2305.

Mr. Stoughton, of Michigan, said: "Aside from the three-dollar gold piece, which is a deviation from our metrical ratio, and therefore objectionable, the only change in the present law is in more clearly specifying the gold dollar as the unit of value. This was probably the intention, and perhaps the effect of the act of March 3, 1849, but it ought not to be left to inference or implication. The value of silver depends, in a great measure, upon the fluctuations of the market, and the supply and demand. Gold is practically the standard of value among all civilized nations, and the time has come in this country when the gold dollar should be distinctly declared to be the coin representative of the money unit."—Id., page 2308.

Mr. Hooper, of Massachusetts: "I now yield

ten minutes to the gentleman of New York (Mr. Potter)."

Mr. Potter said: "Mr. Speaker, this is a bill of importance. When it was before the House in the earlier part of this session I took some objections to it, which I am inclined now to think were not entirely well founded. But, after further reflection, I am still convinced that it is a measure which is hardly worth while to adopt at this time. * * * * * Then, in the next place, this bill provides for the making of changes in the legal tender coin of the country, and for substituting as legal tender coin of only one metal instead as heretofore of two. I think myself this would be a wise provision and that the legal tender coins, except the subsidiary coin, should be gold alone; but why should we legislate on this now when we are not using either of those metals as a circulating medium?"—Id., page 2310.

Mr. Brooks, of New York: "I move to strike out section 1 of the bill."

Then under the five-minute rule of debate upon this amendment, in the course of the debate Mr. Kelley, of Pennsylvania, said: "I wish to ask the gentleman who has just spoken (Mr. Potter) if he knows of any government in the world which makes its subsidiary coinage of full value? The silver coin of England is 10% below the value of gold coin. And acting under the advice of the experts of this country, and of England and France, Japan has made her silver coinage within the last year 12% below the value of gold coin, and for this reason: It is impossible to retain the double standard. The values of gold and silver continually fluctuate. You

cannot determine this year what will be the relative values of gold and silver next year. They were 15 to 1 a short time ago; they are 16 to 1 now.

SINGLE STANDARD AND EXPERIENCE.

Hence all experience has shown that you must have one standard coin, which shall be a legal tender for all others, and then you may promote your domestic convenience by having a subsidiary coinage of silver which shall circulate in all parts of your country as a legal tender for a limited amount, and be redeemable at its face value by your government.

"But, sir, I again call the attention of the House to the fact that the gentleman who opposes this bill insists upon maintaining a silver dollar worth three and a half cents more than a gold dollar, and worth seven cents more than two half-dollars, and that so long as those provisions remain you cannot keep silver coin in the country."—Id., page 2316. The motion to strike out the section was disagreed to.—Id., page 2316.

The above discussion in the House will serve to show that the subsequent claims of the silver men that the bill was passed over without discussion and without being understood, is unfounded. But in spite of this fact the claim is still made that they did not understand the bill. They now complain that, although they took part in the discussion, they had no knowledge of the fact that the dollar was dropped from the list of coins and thus demonetized. The subsequent proceedings and expressions by the Senators from the Pacific coast show that this is but an idle pretense.

On February 11, 1874, during the discussion of the bill for the increase of the National Bank Circulation, Stewart, Senator from Nevada, said:

"I want the standard gold, and no paper money not redeemable in gold; no paper money the value of which is not ascertained; no paper money that will organize a gold board to speculate in it."—(Cong. Rec. Vol II. Part II, page 1392.

And again, on February 20, 1874, during the discussion on the resolution instructing the committee on finance to report a bill providing for the conversion of United States Treasury Notes in gold coin or five per cent. bonds of the United States, Mr. Stewart said:

"By this process we shall come to a specie basis, and when the laboring man receives a dollar it will have the purchasing power of a dollar, and he will not be called upon to do what is impossible for him or for the producing classes to do, figure upon the exchanges, figure upon the fluctuations, figure upon the gambling in New York; but he will know what his money is worth. Gold is the UNIVERSAL STANDARD of the WORLD. Everybody knows what a dollar in gold is worth."—Id. page 1677.

To one who will make these examinations the charge against the 42nd Congress of the "crime of '73," will appear utterly absurd. Silver was at a premium, as compared with gold, of about 3%, so that it cannot be said to have been passed in favor of the gold men. No one predicted the fall in silver. But, it is urged, the people did not understand it. Our government does not provide any means whereby

it can give to the people a knowledge and thorough understanding of the laws as they are passed; but their representatives have that opportunity. If any measure is not understood, or does not work as it was expected, it is the privilege of the people to send such men to Congress as will remedy the evil. Is it fair, under the circumstances, to claim secrecy and stealth, without any foundation, instead of admitting the facts as to its passage, and set out to remedy it, as any other measure which has not met the approval of the people?

EFFECT OF COINAGE OF TRADE DOLLAR.

The effect of the coinage of the trade dollars did not appear immediately. The trade dollars were intended to circulate in China and other countries of the East, where the trade in silver was principally carried on. They were heavier than the standard dollar of previous coinage and also than the Mexican dollar, which it was intended to supersede in the Eastern trade. It was simply a convenient method of selling silver. Nor was it intended to circulate in the United States, but its substitution for the 384-grain dollar made it a legal tender for five dollars. As soon as the price of silver fell so that they were worth less than one dollar, they began to circulate at home and were used in the retail trade. So in 1876 Congress took away their legal tender power and in 1878 suspended the coinage of trade dollars entirely.

AN ATTEMPT TO INFLATE THE CURRENCY.

At this time the country was on a currency or "greenback" basis, no coin being in circula-

tion. An attempt to inflate this currency was made in 1874, when Congress passed a bill for the issue of $44,000,000 greenbacks, exactly the amount retired by McCulloch, but the measure was vetoed by President Grant, and not re-passed. The re-action from this extreme led to the Specie Resumption Act in 1875. It authorized the Secretary of the Treasury to sell bonds to obtain the coin necessary for paying the greenbacks as they should be presented after January 1, 1879. $95,500,000 were obtained in this way, and on the day of resumption there was in the Treasury $135,000,000 of gold for this purpose. Only $11,000,000 were drawn out during the first year.

BLAND-ALLISON ACT 1878.

In 1876 the price of silver had fallen about 10 per cent. At once the same men who were in favor of the inflation of the currency, finding that the law of 1873 had abolished the silver dollar, which had been the only legal tender coin of that metal since 1853, commenced to clamor for the free coinage of silver at the ratio of 16 to 1. Many of the same arguments were made in its favor then as are made now. Soon after, the House passed what is known as the Bland bill, a free coinage measure, at a ratio of 16 to 1, the market ratio then being as 18 to 1. This bill was amended in the Senate and finally in 1878, a compromise bill known as the Bland-Allison Act was passed over the President's veto. It provided that the government should buy not less than two million dollars' worth and not more than four million dollars' worth of silver bullion each month, and coin into silver

dollars, which were to be full legal tender, except where otherwise expressly stipulated in the contract. It also authorized the holder of any of these dollars to deposit them in the Treasury and receive certificates of deposit for the same. $378,166,793 were coined under this act, but only about $57,000,000 went into circulation, the remainder being exchanged for certificates, which were not legal tender but were receivable for the public dues. It must be noticed that this measure was not the result of any financial reasoning; it was a compromise between the friends of free silver and their opponents.

It was predicted by the opponents of the measure that it would result in a financial panic; these silver dollars were nothing more or less than fiat money, and that as soon as they became numerous enough there would be a depreciation similar to the depreciation of the greenback during the war. There was no provision in this act for maintaining the two metals at a parity. The act of 1878 was merely the injection of silver money into our currency. No panic followed. This has been explained by the fact that the volume of the National Bank Notes was greatly reduced soon after its passage. $168,000,000 of these bank notes were retired between 1882 and February, 1890, as the result of the conversion (refunding) of the National debt, and the advanced price of United States bonds. The National Banks found it more profitable to sell their bonds at an advanced price and use the money thus realized, than to continue their circulating notes, which could be issued only to an amount of 90% of

their par value, when deposited with the government. The output of the silver dollars under the Bland-Allison act kept pace with the shrinkage in this currency, so therefore no evil results followed. So long as this output continued at a proper ratio to the shrinkage, there could not be any excess of money and a consequent depreciation.

SHERMAN ACT—1890.

The Sherman Act, passed in 1890, was of the same general nature as the act of 1878. There was a free coinage bill passed by the Senate, to which the House refused to concur, and the Sherman bill was the result of a compromise, reported by a conference committee. Under this measure the coinage of silver dollars was to continue until July, 1891, at the rate of 2,000,000 ounces per month, and then cease, the bullion to be stored. It further authorized the Secretary of the Treasury to purchase 4,500,000 ounces of silver bullion per month at the market value and "to issue in payment for such silver bullion, Treasury Notes of the United States, to be prepared by the Secretary of the Treasury," and "such Treasury Notes shall be a legal tender in payment of all debts, public and private, except where otherwise expressly stipulated in the contract," and "that upon demand of any holder of any of the Treasury Notes herein provided for the Secretary of the Treasury shall, under such regulations as he may prescribe, redeem such notes in gold or silver bullion, at his discretion, it being the established policy of the United States to maintain the two metals on a parity

with each other upon the present legal ratio, or such ratio as may be provided by law."

HOW THE LAW WORKED.

The amount to be purchased under the Sherman Act was nearly double the amount of the Bland-Allison law. Let us examine how the law worked. Because of the above parity clause, the practice became that the Secretary had to pay the certificates in the metal at the option of the holder; to do otherwise, would be to prevent the maintenance of the parity. If gold was refused and silver paid, silver would depreciate, that is, the holder would not consider it as desirable as the gold which he had demanded. Let us suppose a bullion dealer to bring bullion to the treasury and to sell it at the market value; he is paid for it in Treasury Notes. He has the privilege of at once presenting these notes for redemption in gold coin. It will be seen, then, that this clause of the law was equivalent to a provision to pay for the silver bullion in gold, at the option of the bullion dealer. More than that, these notes, as soon as they were redeemed, could again be used in paying for bullion and again be redeemed, and so on in an endless chain. Thus the treasury could soon be depleted, unless the coinage of gold and the income of gold in the treasury could keep pace with the redemption of notes. It might have worked all right if the gold thus paid out had remained in the circulation in the country, but with the market ratio far below the legal ratio, Gresham's Law would soon drive the gold out. This was exactly what happened. Within one

year from its passage more than $70,000,000 worth of gold was exported, most of which came from the treasury. The exports for 1892 were very much lower, the excess of exports over imports being about $140,000. But in 1893 there was a renewal of the exports of gold, the largest known in our history, being nearly $109,000,000. There began to arise a distrust of the credit of the government and its ability to pay its Treasury Notes and certificates in gold which, together with decrease in the revenues of the government, precipitated the panic of 1893.

It is difficult to say just what is the cause of a panic. There are generally many causes working to create distrust in the public mind, which, if sufficiently intense, will result in a stampede. What the act of 1890 did, was to provide a channel for the withdrawal of gold from the treasury, such that when the proverbial $100,000,000 gold reserve was reduced, the natural suggestion to a disturbed public mind was national bankruptcy and a fear of the change of the standard of value.

The Sherman law was repealed November 1, 1893. Unlike the laws of 1878 and 1890, it was not a compromise. The silver men opposed the repeal for the purpose of compelling the passage of a free coinage measure. The struggle was principally in the Senate, where "senatorial courtesy" made it possible for the minority to prevent it, for a long time, from coming to a vote. The only concession to the silver men is found in the following:

"And it is hereby declared to be the policy of the United States to continue the use of both

gold and silver as standard money, and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement, or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals, and the equal power of every dollar at all times in the markets and in the payment of debts."

The repeal did not have as much effect as was expected. Gold continued to be drawn out of the treasury. Foreign capital in this country began to be withdrawn in the form of gold; this came mostly from the treasury, because its notes, issued under the acts of 1878 and 1890, and most of the redeemable paper money issued during the Civil War, were still outstanding to a very large amount. As soon as redeemed, they were used again to pay the expenses of the government, and so would go into circulation a second time, to be again redeemed. Thus will be seen one of the pernicious features of redeemable paper money. Any preference, by the public, for gold or silver coin will at once result in the drawing out of the coin in the treasury, by presenting the paper money for redemption. Being paid out again by the government they serve as buckets on the old-fashioned water-wheel, to come in empty and take out gold with every complete round.

Undoubtedly it would be wise if the greenbacks could be retired. So long as they remain in circulation they will have the power of affecting the gold reserves of the government, and thus disturb the stability of our monetary sys-

tem. We will not attempt a discussion of how this could be done. The government owes their retirement to the fact that they are a war debt, and therefore the expense is not to be considered. The question is, how can it be done without contracting our circulating medium. A substitute should be found. Various measures have been proposed by different men. But it is not our purpose to discuss that question in this article.

EFFECT OF DEBASED CURRENCY—PAPER CURRENCY.

The history of the issue of paper money by the government during the Civil war serves to illustrate the effect of a debased currency forced to circulate among the people. It is a practical illustration of the principle that bad money drives the good money out of circulation. Gold ceased to be used, and the banks and the treasury having suspended specie payments, the country was flooded with a depreciated paper currency, worth at times less than fifty cents on the dollar. Later fractional currency was also issued, and the result was that the subsidiary silver coins ceased to circulate. We were on a gold basis with a depreciated paper currency. No metallic money of any kind was used by the people, except in California, where gold circulated by weight. We say on a GOLD BASIS, because the value of the paper money was determined by its gold value in the markets.

THE NEW YORK GOLD ROOM.

The Gold Room in New York was the logical result of this condition of affairs. The Gold Room

was a sort of clearing house for the large export trade in gold. Gold was bought and sold for export to foreign countries, which reached such enormous proportions that a system of clearing balances was established, to do away with the necessity of carrying the gold to and fro between the different dealers in this country. All foreign trade, not only of gold but of all commodities, was regulated by the quotations from the Gold Room, and this reached back into the internal commerce, and retail prices were also regulated by these quotations generally being fixed a little higher to allow for the fluctuations in the markets. The result was that prices were reckoned in paper money and rose correspondingly as the gold value of paper money fell. A reference to Chart No. 2, in our Chapter on Wages, will more fully illustrate these conditions. The proceedings in the Gold Room were very similar to the proceedings on our modern Boards of Trade. Speculators used it very much in the same way to control the market of currency as they do now use the Boards of Trade to control the market of grain, produce, etc., creating fictitious prices of gold ruinous to other speculators, but generally of too short duration to seriously affect the prices throughout the country. Had specie payments not been suspended the depreciation could not have happened. We had at the time of the greenback issue a large supply of gold, and many of our great financiers maintain that a suspension was not necessary.

After the war, with returning prosperity, the greenback began to appreciate correspondingly, as the belief that they would ultimately be re-

deemed increased, until December 17, 1878, a few days before resumption, they were at par. One of the evil effects of the use of paper money of this character is that when it had appreciated and circulated at par with gold, the people lost sight of the fundamental principles of money. They began to believe that the government could create money at any time and to any amount, forgetting the fact that the circulation of such money at par and without fluctuation depended on the belief that it would be redeemed in gold or other money having intrinsic value.

CONCLUSION.

The conclusion from our own history is that the American people have shown a preference for gold, the same as other people of all civilized countries. That representative money will have its value determined by its relative value to gold, and that this will be determined by the assurance of its being redeemed in intrinsic coin.

That we have been practically on a gold basis since a few years after the acts of 1834-1837, when the silver left the country (1840-1844). We are firmly convinced that an attempt to circulate money not redeemable in gold at a face value greater than its intrinsic value, or market value, will result in a depreciation thereof, and drive the better money out. The free coinage of silver at a ratio of 16 to 1 would soon place us on a silver monometallic basis and a silver circulation. Like our currency, it would depreciate and prices rise, but be determined by the market value of silver as compared with gold. In order to maintain a

bi-metallic system, silver can be coined only in a limited amount, otherwise it would depreciate. It is seen that there need be only a slight variation between the legal and market ratio in order to permit the operation of Gresham's Law. The greater this difference, then, the more rapidly would it operate, and with free coinage of silver at 16 to 1, with the market ratio as at present, would cause the greatest contraction that our currency has ever seen and result in an industrial and financial panic the enormity of which cannot be imagined.

PANICS.

Of panics which have followed closely upon the heels of monetary changes the most important are the following: 1837, 1856-7, 1873-4, 1893, and 1895. The panic of 1893 has already been spoken of (page 154).

The panic of 1837 was caused by the interference of President Jackson with the Second Bank of the United States. Jackson, without authority from Congress, withdrew the deposits of the government from the Bank and transferred them to certain State Banks in furtherance of his "spoils system," with the avowed intention of killing the Bank of the United States. But the Bank had enormous capital other than the deposits of the government, and finding itself restricted to the vicinity of Philadelphia it turned itself into a sort of finance company. Loans were recklessly made, a wild speculation followed, which culminated in a panic, when in 1837 the Bank was forced to suspend. It suspended again in 1838 and again in 1841, when the charter expired.

PANIC OF 1856-7.

The panic of 1856-7 was the result of the collapse of the Free Bank system. The Free Banks were banks of issue established under state laws. They were established in most of the states under laws very similar in character. These laws provided for bonds, mortgages and other forms of securities being deposited with the state government, and then the bank was allowed to issue its notes to a cerain per cent. of these securities. The state did not assume any obligation to sustain the credit of the bank, but simply agreed to sell these securities and apply them in payment of the notes. The practice began in 1839, and for a while everything worked very well. But soon their notes were circulated far beyond their ability to redeem them, and they were constantly failing. It became customary for any one desiring capital to build a railroad, or engage in other large enterprises, to establish a bank and locate it where no run could be easily made on it. A certain amount of bonds would be bought and deposited, and as soon as their notes were issued thereon they were used in buying more security, which being deposited, would give the right to issue more notes. Finally these notes would begin to be presented for payment, the bank could not redeem them, and the crash came. The bonds would then be sold and the proceeds applied in the settlement of the affairs of the bank. This kind of bank notes became known as "wild cat" money and the banks as "wild cat" banks.

beginning September 17, and lasting for forty days, was the most severe financial disturbance this country had yet experienced. The following is a description of the panic as given by Horace White in the Fortnightly Review, June 1, 1876, vol. 25, page 810:

"The phenomena antecedent to the crisis were the usual ones—a rise of prices, great prosperity, large profits, high wages and strikes for higher, crowded thoroughfares, large importations, a railway mania, expanded credit, over-trading, over-building and high living."

Failures from the beginning of the panic and the three succeeding years amounted to nearly $650,000,000. During the panic, aid was sought from the government, and the President gave an order for the sale of government bonds to be paid for in legal tender notes. This was expected to

EXPAND OUR CIRCULATION.

But it did not give relief. The banks put the greenbacks in their vaults to meet a run on them, so the stringency was not relieved. The banks attempted to help along matters by using certified checks and clearing-house certificates. This was a form of expansion of bank money, but it did not serve to restore confidence. After forty days, the panic having spent itself, business began to be resumed. "But," says White, "the crisis was ploughing a deep furrow through the mercantile, manufacturing and railway interests, and all branches of speculation. There had been a fall in prices of nearly all commodities except grain, which was sustained by an active

foreign trade. * * * The causes and antecedents of this crisis were of like nature with those of all previous financial crises, from the great tulip speculation in Holland in 1636, down to the present time, viz., a great multiplication of debts based upon a relatively small amount of capital. * * * A financial crisis consists of an undue accumulation of debts, based upon exaggerated and fanciful ideas of the value of property, usually accompanied by the destruction and loss of capital, and the rapid conversion of circulating into fixed capital."

There have been other panics in our history, but this will serve to illustrate their general character. It will be seen that any

DISTRUST IN OUR CREDIT SYSTEM

may at once precipitate a financial crisis. By reference to our Chapter on Credit, page 139, it will be seen how our credit system works. Being independent of the volume of money, and increasing with the demands of trade, any slight distrust may serve to unbalance it. As more than 95% of our trade is being carried on by its means, the result of a contraction in its use are too serious and far-reaching to be imagined. Credit is ultimately based on the intrinsic value of our money, because no government can command or compel foreign commerce to regulate itself to a money which only is such by decree. From this we see how important it is that the standard of value should have great stability.

Any legislation, then, that will cause a lack of confidence in the money unit may precipitate a panic. We believe this would be the inevitable

result of the passage of a law by the United States for the free coinage of silver at a ratio of 16 to 1. Even the certainty that such a law was likely to be passed, would be sufficient to start the nation on the road to financial disaster.

CHAPTER X.

EXTRACTS FROM UNITED STATES COINAGE LAWS.

Sections relating to officers of mint, salaries, etc., are omitted.

Art. 1, Constitution of United States:

Sec. 8 Congress shall have power, * * *

To coin money, regulate the value thereof, and of foreign coin, and fix the standard of weights and measures;

Sec. 10. No state shall * * * coin money, emit bills of credit, make anything but gold and silver coin a tender in payment of debts. * * *

ACT OF APRIL 2, 1792.

AN ACT ESTABLISHING A MINT AND REGULATING THE COINS OF THE UNITED STATES.

Section 9. And be it further enacted that there shall be from time to time struck and coined at the said mint, coins of gold, silver, and copper, of the following denominations, values and descriptions, viz.: Eagles—each to be of the value of ten dollars or units, and to contain two hundred and forty-seven grains and four-eighths of a grain of pure, or two hundred and seventy grains of standard gold. Half eagles — each to be of the value of five dollars, and to contain one hundred and twenty-three grains and six-eighths of a grain of pure, or one hundred and thirty-

five grains of standard gold. Quarter eagles—each to be of the value of two dollars and a half dollar, and to contain sixty-one grains and seven-eighths of a grain of pure, or sixty-seven grains and four-eighths of a grain of standard gold. Dollars or units—each to be of the value of a Spanish milled dollar as the same is now current, and to contain three hundred and seventy-one grains and four-sixteenths of a grain of pure, or four hundred and sixteen grains of standard silver. Half dollars—each to be of half the value of the dollar or unit, and to contain one hundred and eighty-five grains and ten sixteenth parts of a grain of pure, or two hundred and eight grains of standard silver. Quarter dollars—each to be of one-fourth of the value of the dollar or unit, and to contain ninety-two grains and thirteen-sixteenth parts of a grain of pure, or one hundred and four grains of standard silver. Dismes (dimes)—each to be of the value of one-tenth of a dollar or unit, and to contain thirty-seven grains and two sixteenth parts of a grain of pure, or twenty grains and forty-one and three-fifth parts of a grain of standard silver. Half dimes—each to be of the value of one-twentieth of a dollar, and to contain eighteen grains and nine sixteenth parts of a grain of standard silver. Cents—each to be of the value of one-hundredth part of a dollar, and to contain eleven penny-weights of copper. Half cents—each to be of the value of half a cent, and to contain five penny-weights and half a penny-weight of copper.

Sec. 11. And be it further enacted, that the proportional value of gold to silver in all coins

which shall by law be current as money within the United States, shall be as fifteen to one, according to quantity in weight, of pure gold and pure silver; that is to say, every fifteen pounds weight of pure silver shall be of equal value in all payments, with one pound weight of pure gold, and so in proportion as to any greater or less quantities of the respective metals.

Sec. 12. And be it further enacted, that the standard for all gold coins in the United States shall be eleven parts fine to one part alloy; and accordingly, that eleven parts in twelve of the entire weight of each of said coins shall consist of pure gold, and the remaining one-twelfth part of alloy; and the said alloy shall be composed of silver and copper, in such proportions not exceeding one-half silver as shall be found convenient; to be regulated by the director of the mint, with the approbation of the President of the United States, until further provision shall be made by law. * * *

Sec. 13. And be it further enacted, that the standard of all silver coins of the United States shall be one thousand four hundred and eighty-five parts fine to one hundred and seventy-nine parts alloy; and accordingly, that one thousand four hundred and eighty-five parts in one thousand six hundred and sixty-four parts of the entire weight of each of said coins shall consist of pure silver, and the remaining one hundred and seventy-nine parts of alloy; which alloy shall be wholly of copper.

Sec. 16. And be it further enacted, that all the gold and silver coins which shall have been struck at, and issued from the said mint, shall

be a lawful tender in all payments whatsoever, those of full weight according to the respective values hereinbefore declared, and those of less than full weight at values proportional to their respective weights. (I. Statutes at Large, 246.)

ACT OF JUNE 28, 1834.

CONCERNING GOLD COINS OF THE UNITED STATES AND FOR OTHER PURPOSES.

Be it enacted * * *, that the gold coins of the United States shall contain the following quantities of metal, that is to say: each eagle shall contain two hundred and thirty-two grains of pure gold, and two hundred and fifty-eight grains of standard gold; each half-eagle one hundred and sixteen grains of pure gold and one hundred and twenty-nine grains of standard gold; each quarter eagle shall contain fifty-eight grains of pure gold and sixty-four and a half grains of standard gold; every such eagle shall be of the value of ten dollars; every such half eagle shall be of the value of five dollars; and every such quarter eagle shall be of the value of two dollars and fifty cents; and the said gold coins shall be receivable in all payments when of full weight, according to their respective values; and when less than full weight, at less values proportioned to their respective actual weights.

Sec. 2. And be it further enacted, that all standard gold or silver deposited for coinage after the thirty-first day of July next, shall be paid for in coin under the direction of the Secretary of the Treasury, within five days from the

making of such deposit, deducting from the amount of said deposit of gold and silver one-half of one percentum; provided, that no deduction shall be made unless said advance be required by such depositor within forty days.

Sec. 3. And be it further enacted, that all gold coins of the United States, minted anterior to the thirty-first day of July next, shall be receivable in all payments at the rate of ninety-four and eight-tenths of a cent per pennyweight. —4 Statutes at Large, 699.

ACT OF JANUARY 18, 1837.

FURTHER IN REGARD TO THE ESTABLISHMENT OF A MINT AND REGULATIONS OF COINS OF THE UNITED STATES.

Sec. 8. And be it further enacted, that the standard for both gold and silver coins of the United States shall hereafter be such, that of one thousand parts by weight, nine hundred shall be of pure metal, and one hundred of alloy; and the alloy of the silver coins shall be of copper and the alloy of the gold coins shall be of copper and silver, provided that the silver do not exceed one-half of the whole alloy.

Sec. 9. And be it further enacted, that of the silver coins, the dollar shall be of the weight of four hundred and twelve and one-half grains; the half dollar of the weight of two hundred and six and one-fourth grains; the quarter dollar of the weight of one hundred and three and one-eighth grains; the dime or one-tenth part of a dollar, of the weight of forty-one and a quarter grains; and the half dime, or twentieth part of a

dollar, of the weight of twenty grains and five-eighths of a grain. And that dollars, half dollars and quarter dollars, dimes and half dimes, shall be legal tenders of payment, according to their nominal value, for any sums whatever.

Sec. 10. And be it further enacted, that of the gold coins, the weight of the eagle shall be two hundred and fifty-eight grains; that of the half eagle one hundred and twenty-nine grains; and that of the quarter eagle sixty-four and one-half grains. And that for all sums whatever, the eagle shall be a legal tender of payment for ten dollars; the half eagle for five dollars, and the quarter eagle for two and one-half dollars.

Sec. 11. And be it further enacted, that the silver coins heretofore issued at the mint of the United States, and the gold coins issued since the thirty-first day of July, one thousand eight hundred and thirty-four, shall continue to be legal tenders of payment for their nominal values, on the same terms as if they were of the coinage provided for by this act.—5 Statutes at Large, 186.

ACT OF MARCH 3, 1849.

AUTHORIZING THE COINAGE OF GOLD DOLLARS AND DOUBLE EAGLES.

Be it enacted * * *, that there shall be from time to time struck and coined at the Mint of the United States, and the branches thereof, conformably in all respects to law (except that on the reverse of the gold dollar the figure of the eagle shall be omitted), and conformably in all respects to the standard for gold coins now es-

tablished by law, coins of gold of the following denominations and value, viz: Double eagles, each to be of the value of twenty dollars, or units, and gold dollars, each to be of the value of one dollar, or unit.

Sec. 2. And be it further enacted, that for all sums whatever the double eagle shall be a legal tender for twenty dollars and the gold dollar shall be a legal tender for one dollar.—9 Statutes at Large, 397.

ACT OF FEBRUARY 21, 1853.

AN ACT AMENDATORY OF THE EXISTING LAWS RELATIVE TO THE HALF DOLLAR, QUARTER DOLLAR, DIME AND HALF DIME.

Be it enacted * * *, that from and after the first day of June, 1852 [three], the weight of the half dollar, or piece of fifty cents, shall be one hundred and ninety-two grains, and the quarter dollar, dime, and half dime, shall be respectively one-half, one-fifth, and one-tenth of the weight of such half dollar.

Sec. 2. And be it further enacted, that the silver coins issued in conformity with the above section, shall be legal tender in payment of debts for all sums not exceeding five dollars.

Sec. 3. And be it further enacted, that in order to procure bullion for the requisite coinage of the subdivisions of the dollar authorized by this act, the Treasurer of the Mint shall, with the approval of the Director, purchase such bullion with the bullion fund of the Mint. * * *

Sec. 4. And be it further enacted, that such coin shall be paid out of the Mint, in exchange

for gold coin at par, in sums not less than one hundred dollars; and it shall be lawful, also, to transmit parcels of the same from time to time to the assistant treasurers, depositories, and other officers of the United States, under general regulations, proposed by the Director of the Mint, and approved by the Secretary of the Treasury; provided, however, that the amount coined into quarter dollars, dimes, and half dimes, shall be regulated by the Secretary of the Treasury.

Sec. 7. And be it further enacted, that from time to time there shall be struck and coined at the Mint of the United States and branches thereof, conformably in all respects to law, and conformably in all respects to the standard of gold coins now established by law, a coin of gold the value of three dollars, or units, and all the provisions of an act entitled, "An act to authorize the gold dollars and double eagles," approved March 3, 1849, shall be applied to the coins herein authorized, so far as the same may be applicable; but the devices and shape of the three-dollar piece shall be fixed by the Secretary of the Treasury.

ACT OF FEBRUARY 12, 1873.

AN ACT REVISING AND AMENDING THE LAWS RELATIVE TO THE MINT, ASSAY OFFICES, AND COINAGE OF THE UNITED STATES.

Be it enacted, * * *

Sec. 14. That the gold coins of the United States shall be a one dollar piece, which, at the standard weight of twenty-five and eight-tenths grains, shall be the unit of value; a quarter eagle,

or two and a half dollar piece; an eagle, or ten dollar piece; a double eagle, or twenty dollar piece. And the standard weight of the gold dollar shall be twenty-five and eight-tenths grains; of the quarter eagle, or two and a half dollar piece, sixty-four and a half grains; of the three dollar piece, twenty-seven and four-tenths grains; of the half eagle, or five dollar piece, one hundred and twenty-nine grains; of the eagle or ten dollar piece, two hundred and fifty-eight grains; of the double eagle, or twenty dollar piece, five hundred and sixteen grains; which coin shall be a legal tender in all payments in their nominal value when not below the standard weight and limit of tolerance provided in this act for the single piece, and when reduced in weight below said standard and tolerance, shall be a legal tender at valuation in proportion to their actual weight; and any gold coin of the United States, if reduced in weight by natural abrasion not more than one-half of one percentum below the standard weight prescribed by law, after a calculation of twenty years, as shown by its date of coinage, and at a ratable proportion for any period less than twenty years, shall be received at their nominal value by the United States Treasury and its offices, under such regulations as the Secretary of the Treasury may prescribe for the protection of the government against fraudulent abrasions or other practices; and any gold coin in the treasury of the United States reduced in weight below this limit of abrasion shall be re-coined.

Sec. 15. That the silver coins of the United States shall be a trade dollar, a half dollar, or fifty cent piece; a quarter dollar, or twenty-five

cent piece; a dime, or ten cent piece; and the weight of the trade dollar shall be four hundred and twenty grains Troy; the weight of the half dollar shall be twelve grams and one-half of a gram; the quarter dollar and the dime shall be respectively one-half and one-fifth of the weight of the said half dollar; and such coin shall be legal tender at their nominal value for any amount not exceeding five dollars in any one payment.—17 Statutes at Large, 424.

ACT OF JANUARY 14, 1875.

AN ACT TO PROVIDE FOR THE RESUMPTION OF SPECIE PAYMENTS.

Be it enacted, * * * That the Secretary of the Treasury is hereby authorized and required, as rapidly as practicable, to cause to be coined at the mints of the United States, silver coins of the denominations of ten, twenty-five, and fifty cents, of standard value, and to issue them in redemption of an equal number and amount of fractional currency of similar denominations; or at his discretion, he may issue such silver coins through the mints, the sub-treasuries, public depositories, and postoffices of the United States; and, upon such issue, he is hereby authorized and required to redeem an equal amount of such fractional currency until the whole amount of such fractional currency outstanding shall be redeemed.

Sec. 2. That so much of Section 3524 of the Revised Statutes of the United States as provides for a charge of one-fifth of one percentum for converting standard gold bullion into coin

is hereby repealed, and hereafter no charge shall be made for that service.—18 Statutes at Large, Part III., 296.

ACT OF JULY, 1876.

JOINT RESOLUTION FOR THE ISSUE OF SILVER COIN.

Resolved, That the Secretary of the Treasury, under such limits and regulations as will best secure a just and fair distribution of the same through the country, may issue the silver coin at any time in the treasury to an amount not exceeding ten million dollars in exchange for an equal amount of legal tender notes; and the notes so received in exchange shall be kept as a special fund separate and apart from all other money in the treasury, and be re-issued only upon the retirement and destruction of a like sum of fractional currency received at the treasury in payment of dues to the United States; and said fractional currency, when so substituted, shall be destroyed and held as part of the sinking fund, as provided in the act approved April seventeen, eighteen hundred and seventy-six.

Sec. 2. That the trade dollar shall not hereafter be a legal tender, and the Secretary of the Treasury is hereby authorized to limit from time to time the coinage thereof to such an amount as he may deem sufficient to meet the export demand for the same.

Sec. 3. That, in addition to the amount of subsidiary silver coin authorized by law to be issued in redemption of the fractional currency, it shall be lawful to manufacture at the several

Mints, and issue through the treasury and its several offices, such coin to an amount that, including the amount of subsidiary silver coin and of fractional currency outstanding, shall, in the aggregate, not exceed, at any time, fifty million dollars.—(19 Statutes at Large, 215.)

ACT OF FEBRUARY 28, 1878.

AN ACT TO AUTHORIZE THE COINAGE OF THE STANDARD SILVER DOLLAR, AND TO RESTORE ITS LEGAL-TENDER CHARACTER.

Be it enacted, that there shall be coined at the several Mints of the United States, silver dollars of the weight of four hundred and twelve and a half grains troy of standard silver, as provided in the act of January eighteen, eighteen hundred and thirty-seven, on which shall be the devices and superscriptions provided by said act, which coins, together with all silver dollars heretofore coined by the United States of like weight and fineness, shall be a legal tender, at their nominal value, for all debts and dues, public and private, except where otherwise expressly stipulated in the contract. And the Secretary of the Treasury is authorized and directed to purchase, from time to time, silver bullion, at the market price thereof, not less than two million dollars' worth per month, nor more than four million dollars worth per month, and cause the same to be coined monthly as fast as so purchased into such dollars; and a sum sufficient to carry out the foregoing provision is hereby appropriated out of any money in the treasury not otherwise appropriated. And any gain or seigniorage arising from

this coinage shall be accounted for and paid into the treasury, as provided under existing laws relative to the subsidiary coinage; provided, that the amount of money at any one time invested in such silver bullion, exclusive of such resulting coin, shall not exceed five million dollars; and provided further, that nothing in this act shall be construed to authorize the payment in silver of certificates of deposit issued under the provisions of section two hundred and fifty-four of the Revised Statutes.

Sec. 2. That, immediately after the passage of this act, the President shall invite the governments of the countries composing the Latin Union, so called, and of such other European nations as he may deem advisable, to join the United States in a conference to adopt a common ratio as between gold and silver, for the purpose of establishing, internationally, the use of bimetallic money, and securing fixity of relative value between those metals; such conference to be held at such place, in Europe or in the United States, at such time within six months, as may be mutually agreed upon by the Executives of the governments joining in the same; whenever the governments so invited, or any three of them, shall have signified their willingness to unite in the same, the President shall, by and with the advice and consent of the Senate, appoint three commissioners, who shall attend such conference on behalf of the United States, and shall report the doings thereof to the President, who shall transmit the same to Congress. Said commissioners shall each receive the sum of twenty-five hundred dollars and their reasonable expenses, to be approved by the Secretary of State;

and the amount necessary to pay such compensation and expenses is hereby appropriated out of any money in the treasury not otherwise appropriated.

Sec. 3. That any holder of the coin authorized by this act may deposit the same with the Treasurer or any Assistant Treasurer of the United States, in sums not less than ten dollars, and receive therefor certificates of not less than ten dollars each, corresponding with the denominations of the United States Notes. The coin deposited for or representing the certificates shall be retained in the treasury for the payment of the same on demand. Said certificates shall be receivable for customs, taxes, and all public dues, and, when so received, may be reissued.

Sec. 4. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

Note.—The above act having been returned by the President of the United States, with his objections, to the House of Representatives, February 28, 1878, was passed by both Houses, and became a law on the same day.

ACT OF JUNE 9, 1879.

AN ACT TO AUTHORIZE THE REDEMPTION OF SILVER COINS.

Be it enacted, that the holder of any of the silver coins of the United States of smaller denominations than one dollar may, on presentation of the same in sums of twenty dollars, or any multiple thereof, at the office of the Treasurer or any Assistant Treasurer of the United States, receive therefor lawful money of the United States.

Sec. 3. That the present silver coins of the United States of smaller denominations than one

dollar shall hereafter be a legal tender in all sums not exceeding ten dollars in full payment of all dues, public and private.

ACT OF JULY 14, 1890.

AN ACT DIRECTING THE PURCHASE OF SILVER BULLION AND THE ISSUE OF TREASURY NOTES THEREON, AND FOR OTHER PURPOSES.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the Secretary of the Treasury is hereby directed to purchase, from time to time, silver bullion to the aggregate amount of four million five hundred thousand ounces, or so much thereof as may be offered in each month, at the market price thereof, not exceeding one dollar for three hundred and seventy-one and twenty-five hundredths grains of pure silver, and to issue in payment for such purchases of silver bullion Treasury Notes of the United States, to be prepared by the Secretary of the Treasury, in such form and of such denominations, not less than one dollar nor more than one thousand dollars, as he may prescribe, and a sum sufficient to carry into effect the provisions of this act is hereby appropriated out of any money in the Treasury not otherwise appropriated.

Sec. 2. That the Treasury Notes issued in accordance with the provisions of this act shall be redeemable on demand, in coin, at the treasury of the United States, or at the office of any Assistant Treasurer of the United States, and

when so redeemed may be re-issued; but no greater or less amount of such notes shall be outstanding at any time than the cost of the silver bullion and the standard silver dollars coined therefrom, then held in the treasury purchased by such notes; and such Treasury Notes shall be legal tender in payment of all debts, public and private, except where otherwise expressly stipulated in the contract, and shall be receivable for customs, taxes, and all public dues, and when so received may be re-issued; and such notes, when held by any national banking association, may be counted as a part of its lawful reserve. That upon demand of the holder of any of the Treasury Notes herein provided for the Secretary of the Treasury shall, under such regulations as he may prescribe, redeem such notes in gold or silver coin, at his discretion, it being the established policy of the United States to maintain the two metals on a parity with each other upon the present legal ratio, or such ratio as may be provided by law.

Sec. 3. That the Secretary of the Treasury shall each month coin two million ounces of the silver bullion purchased under the provisions of this act into standard silver dollars until the first day of July, eighteen hundred and ninety-one, and after that time he shall coin of the silver bullion purchased under the provisions of this act as much as may be necessary to provide for the redemption of the Treasury Notes herein provided for, and any gain or seigniorage arising from such coinage shall be accounted for and paid into the treasury.

Sec. 4. That the silver bullion purchased under the provisions of this act shall be subject

to the requirements of existing law and the regulations of the Mint service governing the methods of determining the amount of pure silver contained, and the amount of charges or deductions, if any, to be made.

Sec. 5. That so much of the act of February twenty-eighth, eighteen hundred and seventy-eight, entitled "An act to authorize the coinage of the standard silver dollar and to restore its legal-tender character," as requires the monthly purchase and coinage of the same into silver dollars of not less than two million dollars, nor more than four million dollars worth of silver bullion, is hereby repealed.

Sec. 6. That upon the passage of this act the balances standing with the Treasurer of the United States to the respective credits of national banks for deposits made to redeem the circulating notes of such banks, and all deposits thereafter received for like purpose, shall be covered into the treasury as a miscellaneous receipt, and the Treasurer of the United States shall redeem from the general cash in the treasury the circulating notes of said banks which may come into his possession subject to redemption; and upon the certificate of the Comptroller of the Currency that such notes have been received by him and that they have been destroyed and that no new notes will be issued in their place, reimbursement of their amount shall be made to the Treasurer, under such regulations as the Secretary of the Treasury may prescribe, from an appropriation hereby created, to be known as National bank notes, Redemption account; but the provisions of this act shall not apply to the deposits re-

ceived under section three of the act of June twentieth, eighteen hundred and seventy-four, requiring every National bank to keep in lawful money with the Treasurer of the United States a sum equal to five percentum of its circulation, to be held and used for the redemptio of its circulating notes; and the balance remaining of the deposits so covered shall, at the close of each month, be reported on the monthly public debt statement as debt of the United States bearing no interest.

Sec. 7. That this act shall take effect thirty days from and after its passage.

ACT OF NOVEMBER 1, 1893.

AN ACT TO REPEAL PART OF AN ACT APPROVED JULY 14, 1890, ENTITLED "AN ACT DIRECTING THE PURCHASE OF SILVER BULLION AND THE ISSUE OF TREASURY NOTES THEREON, AND FOR OTHER PURPOSES."

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, that so much of the act approved July fourteenth, eighteen hundred and ninety entitled "An act directing the purchase of silver bullion and issue of Treasury Notes thereon, and for other purposes," as directs the Secretary of the Treasury to purchase from time to time silver bullion to the aggregate amount of four million five hundred thousand ounces, or so much thereof as may be offered in each month at the market price thereof, not exceeding one dollar for three hundred

and seventy-one and twenty-five one-hundredths grains of pure silver, and to issue in payment for such purchases Treasury Notes of the United States, be, and the same is hereby, repealed. And it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money, and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement, or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals, and the equal power of every dollar at all times in the markets and in the payment of debts. And it is hereby further declared that the efforts of the government should be steadily directed to the establishment of such a safe system of bimetalism as will maintain at all times the equal power of every dollar coined or issued by the United States, in the markets and in the payment of debts.

CHAPTER XI.

CONCLUSIONS.

The great money question is upon us, and must be solved, for the contending forces are giants, and will not be satisfied with an evasion of the issues. What has precipitated this question at the present period of our history? This question we will first seek to answer.

A commodity serves the purpose of money only as it fulfills these three functions: (1) Medium of exchange, (2) Measure of value, (3) Standard for deferred payments, better than any other commodity. In the history of money the unit of value has been changed as society progressed. It has evolved from the primitive shells and wampum of the native tribes to the present

METALLIC CURRENCY.

Now the question arises, shall gold supersede silver as a circulating medium? or shall silver continue on a parity or supplant gold? As early as the beginning of the present century England decided for the superiority of gold, and in 1816 formally adopted the single gold standard. Looking back over our own history, we see from Hamilton's Treasury Report that an effort was made to maintain gold and silver on a parity of 15 to 1, but in 1834 this policy was abandoned and the value of the gold dollar was lowered with the evident intention of driving

silver from the country. (According to Gresham's Law.)

DEMONETIZATIONS OF SILVER.

In 1853, in this country, occurred the practical demonetization of silver, for from that time to 1873 very little silver, except some fractional currency, was coined. In 1873 the United States formally dropped the silver dollar from the list of coins, although the action was of little effect, as the results had really been accomplished by the act of 1853. In 1865 the Latin Union sought, by international agreement, to maintain the standard. In 1871 occurred the great break in the series, which gave evidence that silver was discredited as a staple unit of value. Germany demonetized silver and adopted the imperial gold standard, which has served her so well that she is slow to consider the international bimetallic plan, submitted at the Brussels Monetary Conference in 1892. Then followed in succession the demonetization of silver, in 1873, by Belgium, Holland, and the Scandinavian Monetary Union (Norway, Sweden and Denmark). The Latin Union in 1874 restricted the coinage of silver to 120,000,000 francs per annum, for each country in the league. In 1876 France demonetized silver and was followed by the rest of the European nations. India continued to absorb silver from the West in enormous quantities until, in 1893, when she closed her mints to silver.

FAVORABLE SILVER LAWS.

The only efforts made to stem the downward course of the price of silver were by this country, in 1878 (Bland Act), by the purchase of

silver bullion to be coined into dollars to an amount not less than two and a half million dollars per month, and, in 1890, by the purchase of four and a half million ounces per month. The act of 1890 was repealed in 1893, at a special session of Congress.

Thus we see that all the great commercial

NATIONS OF THE WORLD HAVE DEMONETIZED SILVER

in the course of the two last decades. What has caused this? For an answer we simply look to the immense increase in the production of silver in the world. From 1870 to 1880 the increase was two hundred and fifty per cent. (250%)—as great as the increase from 1860 to 1870 (Chart No. 7, p. 100, while the prospects were that unlimited quantities would be produced in the future. A serious financial question naturally arose among nations holding any considerable quantity of the white metal in their coinage, and they sought to dispose of it as rapidly as possible. Such, then, it appears is the true and natural explanation of the demonetization of silver, rather than any unfounded fear or any other mysterious causes.

REMONETIZATION QUESTION.

The question of the remonetization of silver has been brewing for the last two decades. This agitation has emanated mostly from the West debtor classes, and the producers of to-day, and very naturally, for they have great industrial and pecuniary interests involved and believe they have been sacrificed. The debtor sees a possible gain to be had and the producer feels that he will be

benefited. It has found expression in the Bland-Allison Act of 1878, and the Sherman Bill of 1890, yet the act of 1878 did not affect the market ratio of gold and silver. The increased purchase in the act of 1890 temporarily affected the ratio, but at once stimulated the production in an equal degree, and did not remedy the situation. The panic of 1892-93 aggravated the disaffection of the West, and all the evils accruing from it are attributed to the displacement of silver by gold. Whatever the justice of this claim, certain it is that the money situation was unfortunate. As was to be expected from the suffering incident to the panic, the masses sought a plausible reason, and greedily accepted a proposition concerning which they were uninformed. This, then, explains the numerous adherents throughout the country to the silver cause, believing, as they do, the popular cry "That silver at 16 to 1 is the money of the poor people." The industrial interest of the West has brought about the discussion, but the protection of those interests, while they cannot be neglected, must be subordinated to the general welfare.

PROBLEM.

The question must be solved: FIRST—By a consideration of the justice; and, SECOND—By the practicability of the remonetization of silver, and THIRD—The effect.

JUSTICE.

The crucial point on which the whole question of the justice of remonetization depends is: HAS THE INTRINSIC VALUE OF THE GOLD DOLLAR

APPRECIATED OR RISEN? If the intrinsic value of the gold dollar has appreciated, then certainly those who have contracted long-time debts and obligations in the past have suffered, for their debts must be paid at the expense of greater exertion than when it was contracted.

APPRECIATION OF GOLD.

If the intrinsic value of the gold dollar has not appreciated, then the debtor class have not suffered, and justice would not be done by a remonetization of silver. To prove that the gold dollar has appreciated in intrinsic value the silver advocate points to the low and falling average price of commodities as compared with gold. On the other hand, the gold advocate seeks to prove that these low prices are not due to an appreciation of the value of gold, but, rather (1) to the cheapened transportation rates, (2) to the improvements in machinery and skill and subdivision in labor, and (3) to the improved facilities of exchange. The average decrease price of commodities (as shown in Chapter on Prices) is between 7.8% and 13.22% since 1860, and between 24% and 25.7% since 1873 Whether this decrease in prices is due to the cheapened means of production mentioned above is treated in Chapter III.

WHY AGRICULTURAL PRICES HAVE FALLEN.

Let us look at the influences at work to lower agricultural prices, and see if gold has appreciated as compared with them. Certainly prices would lower as the cost of production lowers. The Eleventh Census (1890) estimates that a man with the use of improved farming ma-

chinery, etc., can do the work which two men could formerly do in preparing the soil for cultivation, and the work that nine men could formerly do in harvesting. The means of production are so cheapened that Senator Peffer, in his report on Agricultural Depression, says: "Wheat can to-day be raised for 35 cents per bushel in Dakota, and for 22 cents in California."

CHEAP TRANSPORTATION.

Again, what does it cost to take the grain to market? We find that to ship a bushel of grain from Chicago to Liverpool costs 54½ cents less to-day than it did 30 years ago; and that transportation rates by land or water are only about one-third of what they were three decades ago.

CHEAPENED MANUFACTURES.

In manufacturing the cheapening in the cost of production has been even greater than in agriculture, due to the marvelous effects of new machinery and inventions which have supplanted the costly hand-work of former times. Added to this is the extensive employment of skilled labor which has greatly increased, and cheapened production. The result derived from this change is cheaper and better machine products.

Then, too, the improved system of business exchange, the ingenious system of banking and credit, makes it possible to use capital twice as efficiently as before. All these influences have tended to lower prices, and to provide our wage earners with increased comforts of life.

COMPETITION IN FARM PRODUCTS.

But another influence has been at work to

lower prices, from which our farmers have derived no benefit, but rather injury. This is the new competition which our exporters of agricultural products have been compelled to meet in the markets of the world. From 1880 to 1888 the immense increase in the output of the new wheat fields of the Argentine Republic, Australia, Russia and South Africa have reduced our contributions of wheat to the world's market from 69.13% to 19.1%. Since 1888 our contributions have been about 35%. Again, while the production of cereals in this country from 1873 to 1888 shows an increase of 100%, yet the population, which is the consuming power, shows an increase of only about 44%.

Thus we see that our cereal market has been greatly contracted by the opening of new cheap producing fields and by new foreign competition, while our home production has increased much faster than our population, or, in other words, consuming power. This has resulted in a great overproduction of cereals, and a consequent and a natural fall in their prices. With all these various forces at work to lower the prices of commodities, is it surprising that these prices have fallen? These reasons are sufficient in themselves to explain the fall in prices, without seeking an explanation in the intrinsic value of the gold dollar.

Says David A. Wells: "Not a single commodity has fallen which cannot be satisfactorily accounted for by a general economic fall in the cost of production."

INTRINSIC VALUE OF GOLD—HAS IT APPRECIATED?

We shall now consider how the intrinsic value

of the gold dollar has been affected by the demand and supply of gold. Upon the relation of demand and supply its intrinsic value must be fixed. This is as firm and immutable a law in regard to metallic money as it is to all other commodities. FIRST—What are the elements of demand as compared with 1873?

(a) Certainly the demonetization of silver has tended to increase the demand for gold. This, however, is not so marked as might be supposed. Silver is still used universally as subsidiary coin. Again, in our own country there was but little silver coined at any time previous to 1873. The Mint report shows that from 1837 to 1877, exclusive of fractional coins, there were coined but 6,305,321 silver dollars. That since 1873 there have been coined 419,333,208 silver dollars under the acts of 1878 and 1890; hence the demand for silver has not decreased as much as would appear at first sight.

(b) Again, we must not forget that in a progressive society the volume of business is constantly increasing and requires more of the medium of exchange, so there has, perhaps, been an increased demand for money. But it must be remembered that credit is a very important factor on this point.

DEMAND IN ARTS.

(c) Has there been an increased demand in the arts? The chart showing the relation between coined and uncoined gold in the world from 1880 to 1890 shows an increasing consumption of 24.7% in the arts and manufactures, and hence a proportionally increased demand for gold. These three elements, then, constitute

the increased demand for gold since 1873, and certainly, if there had been no increase in the supply in gold the intrinsic value of the gold dollar must have risen.

What, then, were the elements of the supply of gold?

INCREASED GOLD PRODUCTION EXCEEDS THE DEMAND.

(a) The tables given in Chapter VI on the production of gold show a most remarkable increase in gold production in the world since 1873—an increase exceeding 75%, and an increase since 1850 of over 400%. This, then, gives some evidence (which may be amplified by a study of Chapter VI) of the tremendous amount of gold which has been added to the circulating medium of the world. More gold has been added to the world's stock since 1850 than the total product of all previous historic times. Since 1890 the proportion of increase has been constantly growing, adding the immense annual average of $162,000,000. Are there any fears for the future? We are told by men, competent to know, that the future will produce even more rapidly increasing amounts of gold. When we consider that the entire output of the Transvaal ($42,000,000) in 1895 was due to the new Cyanide process, we are convinced that no apprehensions need be entertained concerning the future.

AIDS TO GOLD IMPORTANT.

(b) What other elements have entered to assist in the transaction of the volume of business in the world? Certainly anything which serves

the purposes of money decreases the necessity for metallic money, and hence virtually decreases the demand. Such an element is credit. More than 95% of our business is to-day transacted by means of credit. This credit becomes proportionally more efficient as its basis, that is, metallic money, becomes more stable. Hence we see the supreme importance of maintaining that stability by a sound currency. Louis Garnet, a monetary expert, estimates that credit has decreased the demand for metallic money 126% since 1860.

As further evidence that money has not become scarce we find that the rates of interest on gold throughout the world has fallen. It was estimated some years ago that theoretically interest could not fall below 2%, but money has been loaned on Wall street at 1½%. Certainly interest measures the relation of demand and supply of money. For example, in France at no time has the interest rate of the banks of France been above 4½% since 1873, while before that time, for instance in 1864 to 1867, the rate was respectively 8 and 9%. Such figures represent conditions universally true.

When we consider that the increased production of gold (75%) and the greatly increased efficiency of its substitute and auxiliary (credit), we cannot believe that the increased demand for gold has exceeded its supply, and hence must conclude that the value of the gold dollar has not appreciated, and from all available facts may even have depreciated. Certainly there has been no lack of circulating medium in the country, for the table from Muhlman, in Chapter VI, shows that the per capita circulation is now greater than ever before, and that it has steadily

increased since 1873. In connection with the appreciation it should be noticed that as compared with labor the value of gold has decreased.

CREDITOR CLASS

TO BE INJURED BY SILVER—WHO ARE THEY?

The cry of the silver advocate is against the creditor class, which would be affected by the change, and their demand is that the intrinsic value of the dollar should be cheapened so that the payments of obligations may be in a cheaper money. Who, then, is this creditor class, against whom this attack is made? It is well known that all heavy debts contracted with the great capitalists are stipulated to be paid in gold; and hence they would not be affected or suffer. But it is the poorer classes of creditors who would be paid in a cheaper money. It is the wage-earning laborer who has stock in loan and trust companies; it is the member of any beneficiary organization; it is one of the 5,000,000 holders of life insurance policies, who would lose annually $147,000,000; the needy recipient of the $41,000,000 of pensions annually paid, who would be stripped of half the value of their pensions; the holders of $1,900,000,000 deposits in savings banks will receive one-half the value of their claim.

EFFECT ON THE CAPITALIST.

Indeed, we may rest assured that the capitalist will not wait to be entrapped. He has never been found unable to protect himself. He has made his millions by close observation of financial changes. Their fortunes have been made by

deep thought, and they will cope successfully with this problem. But it is the poor man who must bear the burden. He is neither trained nor sagacious in the puzzling questions of finance. All the credit he may have will be paid at one-half the value they were contracted for.

DEBTOR CLASS

TO BE AIDED—WHO ARE THEY?

On the other hand, who are the heavy debtors? They are the wealthy members of society. They are the heavy speculators in all departments of industry. The holders of railway stock, the bankers who will pay deposits at one-half their present value, etc., for while these men are the wealthiest, they are also the heaviest debtors. The poorer debtors in society are rapidly paying their debts. Indeed, in the decade just passed, 55% of the farm mortgages were paid. The depreciation of the value of debts, then, cannot serve as a relief to the poorer classes of the country.

PRACTICABILITY.

IS IT POSSIBLE TO MAINTAIN THE TWO AT A RATIO?

Now, however, if we assume that justice would be secured by the proposed remonetization of silver, let us see whether such action would be practicable. Would the remonetization of silver change the market value of silver from its present ratio of 32 to 1 to 16 to 1, so that it would coincide with the proposed legal ratio? Let us

first inquire into the causes which tend to depreciate silver and we may then judge what would be the effect of remonetization.

DEMONETIZATION AND COINAGE OF SILVER.

(1) The general demonetization tended to lower the price by the decreased demand for silver which it caused. Yet we find this decreased demand due to demonetization is more apparent than real. Indeed, an examination of the facts shows that there have been coined $999,600,000 more of silver in the world than was demonetized about 1873. Under the Bland-Allison act (1878) and Sherman (1890) there was coined in the United States $642,000,000 of silver, or $360,000,000 in excess of the amount demonetized in 1873. France alone coined, since 1873, $243,000,000 in principal money silver (page 129-130, vol. 1, Berlin Silver Commission).

(2) There was but a slight increase in arts (9.8%) comparing 1885 with the average from 1871 to 1880. (These are the only figures available.)

(3) The absorption of silver by India and the East has greatly decreased. From 1860-1870, it was $490,000,000. From 1870-1880 it was only $243,000,000, and from 1880-1890 only $233,000,000. This, then, caused a greatly decreased demand, which has now entirely ceased. (See Chart No. 10, Chapter VI.)

DECREASED DEMAND FOR SILVER.

(4) How has this decreased demand for silver been met by the supply? The supply rather than decreasing has enormously increased, since 1873. We notice that, beginning with 1873, the production of silver increases with astonishing

rapidity. The average per annum production from 1870-1880 is 70,000,000 ounces, while from 1860-1870 it is only 39,000,000 ounces, an increase of 80% in a single decade! This increase has been even more marked since that date, as will appear from the table of silver production in Chapter VI. Certainly, then, the demonetization of silver has been a minor cause in reducing the price of silver. The consequences of these various influences at work since 1873 have lowered the market value of silver 50%, from a ratio of 16 to 1, to 32 to 1. The remedy proposed by the advocates of silver to overcome the influences is the remonetization of silver.

SILVER, LAW OF SUPPLY AND DEMAND AND FREE COINAGE.

Let us return to the fundamental law which fixed the value of silver as of all things, the law of supply and demand. What will be the demand created by remonetization? The claim made is that the opening of the United States Mint to the unlimited coinage of silver would create an unlimited demand, until the market ratio of the metals would coincide with the legal ratio of 16 to 1. Let us see. Certainly the effect of making silver a full legal tender, at a ratio of 16 to 1, would at once drive the $629,000,000 of gold now in circulation in this country out of circulation (Gresham's Law), and would create a demand equal to that amount for silver or some other substitute. Grant that the demand for silver would be increased by this amount in this country. How will the world's market value for silver be affected? This $629,000,000 of gold will at once find its way to foreign countries to

pay for imports, debts, etc., and will increase their volume of currency by that amount of gold. From a broad view we see that the demand in the world has not increased in the least by the addition of this $629,000,000 worth of silver to our circulation, for the $629,000,000 of gold taken from our currency and added to the world's currency, has caused the world's demand for silver to decrease by just that amount.

WAYS OF INCREASING DEMAND FOR SILVER.

Hence we see that the only means of increasing a demand for silver by unlimited coinage would be by adding to the volume of circulating medium in this country. How much, then, can we add to the circulating medium? Is it possible to inject an unlimited amount of silver into our currency? This may be answered:

(1) By reference to our experience. We find that it was almost an impossibility to force the silver dollars coined by the act of 1878 into circulation, and notwithstanding the period of business expansion, beginning with 1880, the Treasurer found it necessary to transfer them from sub-treasury to sub-treasury at the expense of the government. Even then the dollars were constantly returned to the treasury.

(2) Before silver will be received into the circulation there must be a demand, a necessity, a use for that money. Does such a demand exist to-day? It would seem not. As we observed before, the per capita circulation has increased since 1873 from $19.23 per capita to $22.57 in 1894, while our credit system has decreased the demand for money 126% since 1860.

EFFECT OF FREE SILVER ON SUPPLY OF SILVER.

Having now shown how the elements of demand would be affected by remonetization, what now would be the supply of silver? We learn from an estimate of the Mint report that there is in the world $10,000,000,000 worth of silver. Further, we learn from the Mint report that there is about $4,500,000,000 of silver in the coinage of the world. This, then, would leave the world with five and one-half billions of uncoined silver. Of this about one and a half billion dollars is in India and the East. There are, then, in the world about four billions of dollars in free silver.

The above amount, including the coined money which may be sent to us, the advocates of free silver propose to receive into our mints, if offered. They propose to create an artificial value for the world's stock of silver of over $10,000,000,000 by the unlimited coinage of silver.

EFFECT OF PAST LAWS ON PRODUCTION.

Let us not forget the greatly increased output of silver that must result from the stimulus given by free coinage. What a potent factor this increased output would become, is shown by the results of the silver purchasing act of 1890 (Sherman Act).

Said Dr. Lexis, at the Berlin Silver Commission Conference: "The act of 1890 caused an output of $47,600,000, which never would have been produced, and this aborted the possible advantages of the act." To-day enormous quantities of silver can be produced, which now lies dormant, on the slightest intimation that it will find a revised market. When we consider the demand created by the free coinage of silver to

be conjectural, and, at best, not considerable, and that the supply to be absorbed is $10,000,000,000, we can but conclude that the remonetization of silver by the United States alone would not only be dangerous, but would be wholly inefficient to raise the market price of this vast amount of silver so as to have the market ratio of 32 to 1 coincide with the legal ratio of 16 to 1.

The only alternative position for the silver men, then, is silver monometallism. We have now found that the remonetization of silver would neither serve the ends of JUSTICE nor would its purposes be practicable.

EFFECTS.

DISASTROUS OR BENEFICIAL?

What, now, would be the immediate and ultimate EFFECTS of the adoption of free coinage by this country?

EFFECT ON VOLUME OF CURRENCY.

(1) As to effects to our own NATIONAL PROSPERITY. The immediate effects of giving silver a 16 to 1 legal ratio must inevitably be to drive gold from circulation, to the amount of $629,000,000, which would immediately contract the currency about 33%. This is a consideration which in itself shows the fatal consequences that would immediately follow the free coinage of silver at 16 to 1.

EFFECT ON CREDIT.

But incompariably worse would be the contraction of credit, which would result from any uncertainty in the staple value of the unit dol-

lar. More than 95% of our business is carried on by credit. These credit exchanges are, of course, based on the metallic dollar. If this dollar fluctuates in value, our experience teaches us that our credit exchange will be disastrously affected. Such a condition of affairs must be looked forward to by a reasonable and conservative man with apprehension, and fear for our industrial interests. Such a contraction of our currency as must occur from the withdrawal of gold and the destruction of our credit system, has no counterpart in monetary history, and would be followed by an unprecedented series of disasters. Banks would find themselves with insufficient reserves. Loans must be contracted or cease. Creditors can neither meet past obligations, nor contract new ones necessary to continue their business. Employers must cease to employ laborers because of lack of funds, and then will ensue the most painful period of destitution and industrial depression that has ever afflicted any country in the world's history. This is no idle picture, but is an unavoidable condition which will inevitably follow the adoption of a system of free coinage in this country.

CONTRACTION SUPPLIED BY SILVER.

That the currency will be thus contracted cannot be seriously questioned. But silver advocates contend that the gold at first withdrawn will be supplanted by silver or silver certificates. The Secretary of the Treasury tells us that the utmost capacity of our mints is $40,000,000 silver per annum. At this rate it would take fifteen years to coin sufficient silver to fill the gap in the currency left by the extraction of gold. The de-

struction of the credit system, however, would be irreparable, and could never be replaced by an increased supply of silver money.

We must expect, therefore, that not only on the passage of a free coinage act, but as soon as there is a reasonable probability of the passage of such an act, the contraction of the currency will commence, and then will follow a monetary revolution which must result in the greatest evils and the most distressing experience that has ever been caused by hasty legislation.

EFFECT ON PRICES AND WAGES.

What would be the effect on prices and wages, and how would this affect the great mass of our people? Now, the avowed purpose of free silver at 16 to 1 is to raise the prices of commodities, and certainly this must occur. This increased price of commodities will of course be uniform on all articles.

EFFECT UPON LABORER—HIS WAGES SLOW TO RISE.

The effect on the laboring man, or wage earner, must then evidently be that he will secure less goods for the same wages. Now, if his wages are increased in the same proportion, then certainly he will not suffer. But will they? Every one knows that prices will rise or fall in a day in response to the slightest influences, and hence would rise immediately with free silver.

But how about wages? Here the case is quite different. Wages cling tenaciously to a fixed standard, and an increase in wages, or salaries, must be a matter of time. That these facts are

true, is proven beyond dispute by a study of all our industrial disturbances. Look at the Chart on the Course of Wages and Prices. Chapter V, and consider the causes of the changes and this becomes evident. Take the changes due to the war. Wages rose 45% (in currency) by 1865, but prices rose over 85%. The five years following the panic of 1873 changed wages 8%, but changed prices 16%. In both cases the purchasing power of wages decreased. The laborer or any wage earner, then, must suffer from the proposed free legislation and a great supply of cheap money.

LESS EMPLOYMENT FOR LABOR.

But the laboring man must suffer in other ways. Labor is abundant just in proportion as capital used in industries is abundant. A large percentage of this capital is borrowed capital. All such borrowed capital would be withdrawn from industries, for every creditor who had a loan, which was due, would at once collect his obligation, rather than be paid later in money worth one-half of the value of the present gold dollar. It appears indisputable, then, that the wage earner must suffer from any free silver legislation, for he above all others is less able, and yet feels first, the suffering which must follow from a cheapened currency.

EFFECT ON INTERNATIONAL COMMERCE.

INJURE TRADE WITH GOLD STANDARD COUNTRIES.

We have now treated the effects of free silver on our own national prosperity. What, now,

would be its effect on our international relations? We must remember that whatever changes legislation may make in the legal ratio of gold or silver, this can never affect the ratio of their market value, that is, the value they have as commodities. The debts between nations are always paid in bullion measured on the basis of the market value.

EFFECT UPON MARKET VALUES OF GOLD AND SILVER.

How will this market value of the metals, then, be affected? The $629,000,000 in gold which leaves this country will be replaced by silver coming from abroad. Hence the world's bullion value of gold will not lower, for while there has been an increased supply of gold to the amount of $629,000,000 outside of this country, there has been an equally increased demand for gold due to the extraction of the silver sent to this country. Now, while the United States, by its legislation, can make silver a legal tender for debts in this country, it can not do so for the world. Our commercial relations with foreign countries and the debts and obligations incurred must always be paid on a basis of the market value of the two metals (gold and silver).

GOLD NATIONS WILL DEMAND GOLD IN TRADE.

If we import English goods, the Englishman will demand gold for his goods, or if he is paid in silver, he will demand sufficient silver so that at the bullion value it will exchange for his price; that is, if the market value of the bullion in the United States dollar equals fifty cents in gold he will demand one dollar in gold for his

goods, or two silver dollars, or their equivalent.

If the American dealer exports goods, he will not accept silver for his goods, measured in gold prices when silver is worth less than gold, but will demand his pay according to the bullion value. Now, these two commodities, gold and silver, must fluctuate in the ratio of their market values, according as they are differently affected by the supply and demand, by the cost of production, etc., but every such fluctuation in the ratio of the value of gold and silver will disturb the entire commercial relations between gold and silver-using countries, and will destroy all stability in business speculation. This only illustrates the unnatural disturbances which must result from our going to a silver basis. Such fluctuations would not only have a discouraging influence upon our foreign commerce, but must prove fatal to its natural expansion.

SUMMARY OF THE SITUATION.

To summarize the effects of free coinage at 16 to 1, we must conclude that its avowed purpose of securing justice to the poor debtor class, by cheapening the value of his debts, will not be accomplished. Again, if we concede, however, that some benefit would accrue to the poorer classes from such a monetary revolution, even then we believe that in the nature of things, any scheme to give an artificial value to $10,000,000,000 of silver by legislation in this country is wholly IMPRACTICABLE and IMPOSSIBLE.

Now, if we concede that free silver at 16 to 1 would both do JUSTICE and be PRACTICABLE, yet such legislation must cause a contraction of the currency and credit, must cause loans to cease,

must cause prices to rise more rapidly than wages and hence destroy commerce and business, and oppress the wage-earner. In short, it must precipitate a panic of indescribable ruin and devastation in the industrial world. While such must be the immediate effects of free coinage, the ultimate effect can not be more reassuring. Our international commercial relations would be stunted and discouraged.

From an intelligent study of the facts in the issues involved, then, it would seem that national free silver can only result in suffering and disaster.

The discussion of the question at this time is most inopportune, since it aborts all possible international agreement for coinage of silver, which from all indications would soon have become practicable. Every civilized nation has within the last year shown a favorable disposition toward INTERNATIONAL BIMETALLISM. But any inclination to make a national experiment in this country will prevent further action until the result is seen. The aggressive attitude of the silver party, then, can only result in defeating their own purpose, which is to secure a market for silver coinage.

QUESTIONS ON MONEY ASKED AND ANSWERED.

VITAL QUESTIONS WHICH ARE INTERESTING YOU TO-DAY—QUESTIONS ASKED BY ALL.

1. Will an ounce of silver buy as much in commodities to-day as in 1873?

It will not. Silver has fallen over 50% since 1873, and commodities, on the average, have fallen only 7.8%.

2. Has the intrinsic value of the gold dollar appreciated?

No, for the intrinsic value depends on the demand and supply of gold, and this measured by the rate of interest, which has fallen.

3. Has the fall in the market price of silver been due simply to the demonetization of silver?

No. It has fallen because the supply produced far exceeded the demands for coinage. More silver has been coined since 1873 than before that date.

4. Was the panic of 1893 due to a contraction of the currency?

We had an abundance of metallic money, indeed more than at any time in our history, but our credit was contracted from a lack of confidence in the stability and value of our currency. A loss of confidence in monetary stability is a panic producer.

5. Has the market value for silver been contracted since the demonetization, beginning with 1873?

No. The world has coined $999,600,000 more silver than was demonetized. The United States, by the Bland and Sherman acts, has coined $243,000,000, principally dollars.

6. Did the act of 1873 withdraw a market from silver?

No. Only 8,000,000 silver dollars had been coined by the United States from 1805 to 1873. Since 1873 $642,000,000 have been coined. (This includes subsidiary fractional currency.)

7. Has the farmer suffered from the fall in prices?

While prices have fallen, this is due to improvements in production, and the farmer can produce more with the same exertion. Moreover, the prices of agricultural produce have fallen on the average only 2.9%, while general prices of commodities which the farmer must buy have fallen 7.8%.

8. Why has wheat fallen in price?

It has fallen in price because of the great competition which it must meet to-day. The great wheat fields of the Argentine Republic, Australia, India and Russia now compete in the world's market. In 1873 we supplied 69.13% of the world's wheat; in 1888 we supplied only 19.9%. The means of production are cheapened. To produce Dakota wheat costs but 35 cents per bushel, and California wheat 22 cents. There is a constant over-production in this country. From 1873 to 1888 the supply increased over 100%. During the same period the population increased but 44%.

9. Would the farmer be benefited by cheap money and high prices for his products?

No, for while he would receive more money for his grain, its purchasing power and value would not be increased. The price of all the things he must buy will rise in like proportion.

10. Would the free coinage of silver at a legal ratio of 16 to 1 by the United States make a 16 to 1 market ratio for the world?

The market ratio depends entirely upon the supply and demand. Now, unless the United States can either receive all of the $10,000,000,000 of the world's stock of silver into her mints, or create a confidence that she can do it, then her demand can never equal the supply, and the market ratio will not become 16 to 1.

11. Has the value of gold fallen since 1873 with other commodities?

It has, as is shown by the decreased rates of interest. Certainly not quite as much as the average commodity, since it is not possible to cheapen its production by improvements, etc., as much as in the average commodity.

12. What is meant by a legal ratio of 16 to 1?

It means that an ounce of gold shall represent just as much value as a legal tender for debts as 16 ounces of silver, and is fixed by law.

13. What is a market ratio?

The market ratio represents the relation between the value of an ounce of gold, as a commodity, and an ounce of silver, as a commodity. These values are fixed by the laws of supply and demand in the markets of the world. Pound the silver dollar with a hammer and deface it and it is worth only 51 cents. Deface a gold dollar and it is worth always 100 cents.

14. How do the silver advocates propose to change the ratio?

They propose to establish a legal ratio of 16 to 1 by law, and then, by opening the mints to free coinage, they claim they will make a great demand and change the present market ratio of 32 to 1 to the ratio of 16 to 1.

15. Can they change the market ratio from 32 to 1 to a market ratio of 16 to 1 ?

This must be answered by the effect of free coinage on supply and demand. The demand for silver will be increased by the amount of silver coin which can be added to the circulation of this country. The supply is increased by the total volume of silver in the world ($10,000,000,000). The market ratio then cannot be brought to 16 to 1.

16. Who are the debtors and creditors affected by a 16 to 1 legal ratio ?

The wealthiest capitalists are the heaviest debtors. Bankers, insurance corporations, etc., would pay their depositors and policy holders in money worth half of what they received, if free silver was adopted. The majority of creditors are 17,000,000 wage earners, 6,000,000 members of beneficiary organizations, 65,000,000 depositors in banks, 7,000,000 insurance policy holders, all of whom would receive their credits paid in money possessing only one-half the purchasing power of that which they were contracted for.

17. Did the repeal of the Sherman Law bring on the panic of 1893 ?

No. Such statements are evidently false. The panic was at its height before the repeal in October, 1893, and the only reason for the repeal of the bill was to prevent the panic from growing worse. The panic was due to a contraction of

credit caused by a lack of confidence in the stability of our unit dollar, which fear was aggravated by such things as the fear that (1) we would go to a silver basis, created by the Brussels Monetary Conference, in 1892; (2) the depletion of gold reserve to redeem greenbacks and the silver certificates of 1890.

18. What is fiat money?

Fiat money is anything issued by the government as a legal tender to pay money, which circulates as a medium of exchange. It may be paper or a cheap money. In this country the fiat money is the greenback, silver certificate, gold certificate or silver dollar.

19. What will be the effect of free silver upon the laborer and wage earner?

Prices will rise at once, wages will take time to rise; hence for a time the laborer must purchase less for his wages. This evil must be repeated with every monetary disturbance. This is not only reasonable but proven by the experience of the United States in 1860 and 1873 and the experience of England following the reign of Henry VIII.

20. Will the increased price of wheat benefit the farmer any?

No. For while his wheat will secure more money, that money will be silver and each dollar will buy proportionally less goods. If wheat rises from 50 cents to $1.00 his clothes, food, etc., will also rise 100%.

21. What caused the issue of $162,000,000 of bonds under the last administration?

There are about $463,000,000 of greenbacks and silver certificates in circulation. The government must redeem greenbacks and treasury

notes in gold or silver at the option of the holder (as a matter of policy) and the law prescribed they must be re-issued at once. Now, these notes may be redeemed and, when re-issued, again presented and redeemed and so on endlessly, constantly taking gold out of the treasury. This is what was done. Now the law provides that for the redemption of this paper money a reserve of $100,000,000 in gold must be maintained in the United States Treasury. The constant depletion of this $100,000,000 reserve by the redemption of paper money made it necessary to issue the bonds.

22. How much money can the mints of the United States coin per year?

Secretary Carlisle says not in excess of $40,000,000 per year in silver.

23. How long would it take the mints at full capacity to coin sufficient silver to fill the gap left by driving out of circulation $629,000,000 of gold?

It would take about 15¾ years.

24. How much silver money can be injected into the circulation?

Only a limited amount. Experience and reason show that only sufficient money will be received into circulation to accomplish the money exchanges, which are about 5% of the total business exchanges.

25. How much silver would be offered at the mints, if free coinage was adopted?

The free coinage of silver would drive gold from our markets and utterly destroy credit. Silver, if coined free, will be necessary to fill the gap in the currency, dollar for dollar, for the gold withdrawn. Silver, therefore, will be

received and stamped into dollars at the mint until sufficient dollars are coined to serve the demands of business exchange. Then the stamping or coining of silver dollars will cease, for, as there is no necessity for them as circulating medium, they are as valuable in the form of silver bullion or bars, as if stamped into dollars, for the purchasing power of a silver dollar is simply its value as a commodity. The amount of silver sent to be COINED would be determined by the same influences as the amount of gold now sent for coinage, namely, by the demand for circulating money and the market demand.

26. Does the increase in volume of money cause cheap rates of interest?

No. Rates of interest are determined by the surplus wealth in the country and confidence in the money standard. In England interest rates are about one half of what they are here, and yet their circulating medium is less per capita.

27. Would free silver cause cheap interest rates?

Nominally, YES. Really, NO. If a man borrowed $100 in silver he might receive it for $5.00 per annum interest. But what does he receive for his $5.00? He received $100 in cheap silver, which will purchase only as much as $50 in gold to-day, either in food, clothing or anything else he may use it for.

28. What has resulted when nations sought to fix a legal ratio different from the market ratio?

They have driven out of circulation the coin having the greatest intrinsic value.

29. What nations have attempted the bimetallic standard?

Mexico, China and Japan, the free states of South America, the Latin Monetary Union.

30. Did the United States seek to maintain a bimetallic standard?

The United States made the effort from 1793 to 1853, but failed. From 1834 to 1853 gold drove out silver. Practically no silver was coined from 1853 to 1873.

31. What nations have the single gold standard?

England, Germany, Latin Union and the United States. Silver was demonetized by the Scandinavian Monetary Union (Sweden, Norway, Denmark), Holland, Belgium, Switzerland, India and a few others, insignificant.

32. Does free coinage of silver at 16 to 1 to-day drive out gold from countries on that basis?

It does in every case.

33. What advantage has gold over silver?

It has greater stability of value, since its production is more uniform, both in cost and quantity, and it possesses the unquestioned confidence of the people.

34. Are these valuable qualities?

They are. They promote speculation and facilitate exchange. Gold standard countries have the largest commerce and highest wages in commodities.

35. Is there any natural ratio between gold and silver?

No more than there is between the value of sheep and plows, between corn and oats.

36. Is there any stable relation between the amounts of gold and silver produced in the world yearly?

There is not. From 1850-1894 they fluctuated from 16 to 1 to 38 to 1.

37. What is the ratio of the total amount of gold and silver at different periods in the world?

In 1800 the ratio was 32.2 to 1; in 1894 they were 16 to 1.

38. Does Coin tell the truth when he says that prices depend upon the principal or redemption money and on nothing else?

No, it is false. In the Chapter on Credit, the chart on the course of prices, credit and currency disprove this. It is obviously false from a reference to the history of paper money in England, the Continental currency in this country, the assignments of the French Revolution, our inflated greenback prices and prices in Confederate paper money.

39. How has the production of gold in the world been affected since 1873?

The quantity of gold in the world in 1895 was double what it was in 1873.

40. What is the average ratio by weight, covering the entire period ascertainable?

Marshall shows that from 1830 to 1880 there were produced 10,355 tons of gold and 193,000 tons of silver, making a ratio of 18.6. This signifies nothing except as it refutes the attempts to show a natural ratio of production of 16 to 1.

41. How would free silver affect the amount of money in circulation?

It could not increase the money in circulation beyond the necessities of business exchange. The present amount amply fulfils these necessities. It might result in the coinage of a great number of dollars, since bullion would be

more easily measured in dollar form, but this would be no material benefit.

42. What was the first important Coinage Act in our history?

A bill passed in 1792, which provided for the unlimited coinage of gold and silver at 15 to 1.

43. What was the effect of this act?

It drove gold from the circulation, as a gold dollar at that ratio was worth more in the market than a silver dollar.

44. What was the second great Coinage Act?

The act of 1834, which changed the ratio from 15 to 1 to a ratio of 16 to 1.

45. What was the purpose and effect of this act?

Its ostensible purpose was to call back the gold into circulation. Its real purpose was to drive silver from circulation, which it actually did.

46. Did it drive out the subsidiary coin, and why?

The subsidiary coin was issued with exact fractional values to the dollar. Two halves were worth $1.00; 10 dimes $1.00, etc. Hence even the subsidiary coins were driven from circulation because its bullion value was equal to its coined value.

47. What was the third great Coinage Act?

The act of 1853, which reduced the silver in fractional currency about 7%. So 2 half dollars contained 384 grains silver, a dollar contained 412½ grains, and made these coins a legal tender for only $5.00. They were coined on government, not private, account.

48. What was the effect of the act of 1853?

It brought into circulation $60,361,246.70 of subsidiary coin between 1853 and 1873.

49. What was the fourth great Money Act?

The act of 1862. It provided for the issuing of greenbacks for the purpose of carrying on the war.

50. What was the effect?

It inflated all prices because it was worth less than 50 cents on the dollar, and drove gold and silver money, both principal and subsidiary, from circulation.

51. What was the fifth great Money Act?

The Bland-Allison act of 1878. It provided for the purchase and coinage of at least $2,000,000 worth of silver per month by the government and made them full legal tender.

52. What was its purpose?

Its purpose was to stop the downward price of silver.

53. What was its effect?

The silver dollar coined could not be forced into circulation. They were cumbersome and undesirable, and even though the period was one of industrial expansion, the Secretary of the Treasury found it necessary to ship them from sub-treasury to sub-treasury free of charge to keep them in circulation, and even then they constantly returned to the treasury.

54. What was the sixth great Money Act?

The specie resumption act of 1879. This provided for the redemption of the $346,000,000 in greenbacks at sight and the establishment of a reserve fund of $100,000,000.

55. What was the effect of this act?

It made the one dollar in greenbacks equal to the one dollar in gold.

56. What was the seventh great Monetary Act?

The Sherman Act of 1890. It provided for the purchase to the aggregate amount of 4½ million ounces of silver per month, and for the issuing of silver certificates based upon this silver deposited in the treasury. (See page 216.)

57. What was the purpose of the act?

Its purpose was the same as the act of 1878, and it increased the purchases to raise the price of silver.

58. What was its effect?

The flood of silver certificates thrown upon the country caused the withdrawal of gold from the treasury, and was one of the causes of precipitating the panic of 1892-3.

59. What was the eighth great Monetary Act?

The repeal of the Sherman law by special session of Congress, October, 1893.

60. What was its effect?

It tended to allay the alarm, and caused more assurance in the stability of the money unit.

61. What is the $100,000,000 reserve fund?

The act of 1879 provided that a fund of $100,000,000 in gold should be maintained in the treasury for the redemption of the greenbacks, and that it should never fall below the $100,000,000 mark.

62. What is the condition of labor in the silver countries?

The Japanese laborers get fourteen cents per day, and it goes just one-half as far as it did before silver fell. Says Minister Strobes of Chili: "The standard dollar (peso) has fallen much more rapidly than wages have risen.

Wages have risen, it is true, but commodities of food have risen much faster. The capitalist who can pay for production in silver and sell in gold, grows rich rapidly, while labor is seriously depressed." Says Isham Sedgwick, of the Indian Coffee Co.: "The company pays laborers in Nicaragua forty cents per day in silver. The wages amount to about eighteen cents in gold. These workmen pay thirty-five cents per yard for ordinary yard-wide muslin."

63. What is Europe's annual shortage in wheat, and who supplies it?

Europe's shortage in wheat for 1895 was estimated at about 125,000,000 bushels. The Argentine Republic supplied 52,000,000 bushels of that shortage the same year, leaving the balance to be supplied by Russia, Australia and India.

64. Is the demand for money increasing more rapidly than the supply?

It does not appear to be, as the rate of interest is constantly falling. It was estimated by an authority about ten years ago, that theoretically the rate of interest could not fall below 2%. Money has been loaned this year on Wall street at 1½%.

65. Has the value of the silver dollar fallen in silver countries?

Yes. For a check for $1,000 in United States currency will buy over two thousand Mexican silver dollars.

66. What will be the effect of free silver upon the working people?

By the adoption of a cheap money the $41,000,000 given out by the government as pensions will be reduced one-half. The 500,000 people holding insurance policies must lose $147,000,000

annually. The $1,900,000,000 in our savings banks will have but half its former purchasing power. Prices will rise rapidly, while wages and funds like the above will remain stationary.

67. Has the adoption of the gold standard decreased our trade with silver-using countries?

Statements have been made to the effect that the demonetization of silver and the adoption of the gold standard by the great nations of the world has ruined the commerce of these nations with silver-using countries. It is said that the silver standard countries have been unable to trade with gold countries at the former usual profit, and that therefore they have started to produce and manufacture their own commodities and supplies, consequently our exports to these countries have fallen off very rapidly. The imports from Europe to Mexico have increased 10%, those from Central America and the West Indies 118%, and from South America 158%.

68. Are the silver standard countries increasing in wealth?

It is true that these silver countries are growing in improvements, but they are having only the natural improvement which follows advancing civilization.

If they will advance and improve with the world they must adopt and extend the world's improvements.

69. Are the silver certificates of 1890 also redeemed out of the reserve fund?

They are. The law states it is the established policy of the United States to maintain the two metals on a parity with each other upon the present legal ratio, or such ratio as may be provided by law.

70. Does the government redeem its paper in gold?

If the government refused to redeem its paper in gold, and insisted upon paying silver, then it would be evident that the United States had discredited the full value of silver and consider it a cheaper means of payment. Loss of confidence in the government would follow and the disastrous consequences of such an act are obvious.

71. What has been the effect of the redemption of the greenbacks and certificates of 1890.

Up to 1891 they were not presented in large quantities, but since then great quantities have been presented to the treasury for redemption. As soon as redeemed the law prescribes that this paper money shall be immediately re-issued, and when re-issued may again be returned to the treasury and to be paid for in gold. This has occurred, and the result is that the $100,000,000 fund has been reduced and bonds were issued at three various times to an amount aggregating $162,000,000.

72. What should be done to remedy this menace to our currency?

President Cleveland asked Congress in his annual message to redeem them and to withdraw them from circulation. If this could be done gradually without contracting the currency it would be a valuable measure.

73. How could this paper be withdrawn from circulation without contracting the currency?

One practicable measure proposed was to permit the national banks to issue notes to the full amount of their bonds held, rather than only 90% of the same as at present, and also to charge them only ¼% upon their annual circulation

rather than 1%, as at present. This would greatly expand the national bank note circulation and prevent a contraction of currency.

74. Are the national bank notes safe?

Absolutely safe. Not one dollar of national bank notes has been or can be lost with the perfect system now in use.

75. How much silver has been coined under the various coinage acts?

	Dollars.	All other.
1793-1853.....	2,407,590	76,708,309.40
1853-1873.....	5,638,248	60,361,246.70
1873-1894.....	419,333,208	78,416,152.05

76. Will an increased volume of money do away with the necessity for credit?

No. Credit depends upon the confidence in the money unit and not upon the volume of money. This fact is plainly shown in the Chapter on Credit.

77. Why is credit preferable to metallic money in business exchange?

Because it is more rapid, cheaper, and less cumbersome than metallic money in perfecting exchanges.

78. Will free coinage at 16 to 1 destroy credit?

To a greater or less extent. The very fact that there is such a prevalent fear of the silver unit shows that there would be no confidence in it, and hence our immense volume of credit would collapse.

79. What would be the direct results of this contraction of credit?

Credit performs 95% of our business to-day. If it is destroyed banks must cease to loan, credit business must cease, employers cannot pay em-

ployes, and a commercial crisis and financial panic must ensue.

80. What was the trade dollar?

It was a silver coin of 420 grains of silver in place of 412½ grains. This was coined by the government in 1873 on private account. It was not a legal tender, and was intended only to exchange in trade at its bullion value. This it did. Its advantage was that the government's stamp on bullion was an evidence of the fineness and weight in a dollar, thus giving it an advantage over other bullion.

81. How many trade dollars were coined under the act of 1873?

35,965,924 pieces, which is more than four times the dollars coined from 1793 to 1873.

82. Would a debtor having heavy debts be liable to vote for free silver?

On a moral basis he should be a good citizen before a selfish one, and he should seek and have interest in the general welfare of his nation.

83. Would the payment of his debt be made easier?

No. While he may be able to pay his debt with money of half value, how will he secure that money? Immediately upon the adoption of free coinage, business will be utterly prostrated, and the probabilities are that he will be entirely unable to pay his debts.

84. What effect would free coinage have on our foreign trade?

It would injure our commercial position, decrease our trade with gold countries, destroy out international credit, and perhaps increase exchanges with the semi-civilized countries of to-day.

85. What was the Gold Room during the period of 1862 to 1879?

It was a company of New York bankers who insured business men against the effects of fluctuations in the market price of gold and silver in their international trade. They gambled on the market ratio of gold and silver.

86. What was the result of the Gold Room's operation?

Enormous sums, due to the double standard, gold and greenbacks, found its way into the pockets of the gambling bankers. Most of this should have gone into the channels of trade.

87. Would a Gold Room be established if free coinage was adopted?

Without a doubt, and would take immense sums of gold from business men.

88. Would the farmer gain anything if he sold his wheat at $1.00 per bushel in silver, while to-day he sells it for 50 cents in gold?

No. A farmer may sell his wheat for marks or francs, and while he receives more pieces he does not receive an increased value.

89. Why have the prices of farm produce fallen?

The eleventh census shows that in preparing the ground for planting, a man with new machinery can do the work formerly done by two men. That in harvesting, one man can do the work of nine men. The intense competition of cheap labor countries in the world's market has decreased our exports, and therefore has left us with an oversupply of produce.

90. Has the per capita debt of the country been increased since 1873?

There was no record of private debts previous to 1890. The public debt has run as follows:

		Per capita.
1870.....	3,379,253,997	92.8
1880.....	3,045,796,011	60.73
1890.....	2,027,170,546	32.37

We see that all debts of which there is any authentic record have decreased about two-thirds.

91. About what is the average length of private debts to-day?

Authority estimates that it is about five years, and that this average is being constantly shortened.

92. It is alleged that the wealth and prosperity of the country has been checked. Let us investigate the figures:

Value of farm lands (millions).....	$10,197	$13,279
Value of live stock.....	1,500	2,209
Total value of all property.....	43,642	65,037
Per capita value of all.....	870	1.036
Deposits of savings banks (millions).....	819	1.438

93. Has the country permanently tried bimetallism?

No. Almost every country in the world has tried it and abandoned it.

94. What is the difference between national and international bimetallism?

National bimetallism is an attempt by one country to maintain the two metals freely in circulation. International bimetallism is a plan to unite all the great commercial nations by an agreement to maintain the two metals freely and interchangeably in circulation by a free coinage in each country.

95. Are wages as high in the silver using

countries of the world as in the gold standard countries?

They are not.

96. What is a reliable measure of wages from year to year?

Unskilled labor, where it cannot increase intelligence.

97. If gold had appreciated would not the wages of this class of laborers have fallen?

This would no doubt have been the case.

98. Have the wages of unskilled laborers fallen?

No. On the contrary, they have risen, which would show that gold has not appreciated.

99. Why does the silver advocate always speak of wheat when telling of the fall in prices?

Because it has fallen more than the average farm produce.

100. Why does he not speak of corn and rye?

Because they have in some cases risen in price, and in all cases they have fallen but very little.

101. Has the common laborer suffered since 1873?

Assuredly not. His wages have gradually risen, while the prices of that which he eats and wears have fallen.

102. Is the United States commercially independent of other nations?

She is not. The United States owes more debts to foreign investors than any country in the world, and carries on an immense trade which she cannot afford to lose.

103. Has the present cry for free silver had any perceptible effect on business?

Yes, bankers are already becoming more conservative and are contracting their debts in gold.

104. Will the holders of the United States bonds be paid in 50-cent dollars?

No. The United States bonds are almost entirely payable in gold.

105. Would the silver miners be benefited by free coinage?

They would be benefited by the temporary artificial price given to silver by the confusion and excitement after the passage of the law. Then matters will settle down and the price of silver will fall as the money market is supplied and the production continues to increase.

106. Why does the silver dollar circulate at an equal value with gold in this country to-day?

Because it is backed by nation's credit and the government will accept them in payment of all the United States debts. So also are 100 copper cents made equal to one dollar in the same manner.

107. Would not the same conditions exist if we had free coinage?

No. If silver were made a full legal tender then the silver dollar would be the measure of value in the payment of all debts, and in the exchange and purchase of all commodities.

108. What is the ideal circulating medium for a country?

The most nearly ideal money that the world has found up to the present is the gold standard, in which all people have perfect confidence and which has brought England to her financial and commercial pre-eminence.

109. What is FIXED and CIRCULATING capital?

Fixed capital is any commodity or article which lasts for a succession of operations, and only a part of the value of which passes over to the product at each time.

Circulating capital is any commodity or article which can be used only once or in only one round of operations. A coal cart is fixed capital, while the coal which the cart carries to be burned is circulating capital.

110. What was the origin of the Latin Monetary Union? What countries joined it?

Refer to Chapter VIII.

111. Did the Latin Monetary Union hold a parity between gold and silver?

With the aid of the Indian imports of silver and by changing the ratio many times, they succeeded in keeping the two metals in circulation.

112. Was the commercial ratio between gold and silver steady during the existence of this Union?

At no point does the Commercial and Legal rates coincide after three years of fluctuations—1803-06—now above and now below, the ratio sinks persistently below for seven years—1807-1813—touching the lowest point (a ratio of 16.24) in 1813. For the succeeding five or six years—1813-19—the ratio was consistently above the legal rate, though with less violence and width of divergence. From the latter year, 1819, up to 1850, its course was undeviatingly below $15\frac{1}{2}$; then from 1851-67—the period, *i. e.*, of the great gold outputs of Australia and America—as undeviatingly above. From the last named date

until the close of the bimetallic system in France, and, indeed, up to our own days, the course of the commercial ratio has been again unbrokenly below the 15½ ratio, and, as is too well known, with an ever-increasing enormity of divergence.

So much for the claim that the French law has dowered the world with a steady ratio.—W. A. Shaw.

With the year 1852, the decisive change in the ratio sets in with the new gold influx. The ratio rises above the 15.5 of the French law, and the profit on the importation and coining of silver vanishes. Its place is taken by a corresponding profit on the importation and coinage of gold. The fourteen years during which the ratio remained above the legal 15½ witnessed the importation into France of a total net (or balance) of gold to the amount of 135 millions sterling, and a total net or balance of exportation of silver of 66⅔millions sterling. With 1865 the final, and, so far as the nineteenth century is concerned, the fatal change of the commercial ratio sets in. It sinks persistently and increasingly below the legal 15½, in face and in spite of the united meetings of the Latin Union, and at once the premium on the importation and coinage of gold changes into one of silver. From 1865 to 1875, one year before the abandonment of the coinage of the 5-franc piece and the consequent relinquishment by France of the bimetallic system, her net imports of silver amounted to 56 millions sterling.

As far as these figures of import and export are concerned, they show only the *final* results of the action of bimetallic law. The metal on whose importation and minting a premium was

obtainable *was* imported, and in large quantities. That is the single fact standing out at large. The reciprocal fact—of a corresponding export of the metal over whose head the premium offered—does not emerge so distinctly, simply by reason of the complication of the subject of exports of metals with the wider general movement of trade balances. It also is, however, distinctly perceptible and demonstrable. But this is to speak only in large and of final results.—W. A. Shaw.

113. What was the influence of this divergency of the Commercial from the Legal ratio upon France's store of precious metals?

From 1830 to 1850, while the ratio remained continually below the legal 15½, there was a profit on the import of silver, and a persistent and heavy import took place. In 1830 the (balance of the) silver imported amounted to a matter of 6 millions sterling; in 1831, to 7¼ millions; in 1834, to 4 millions; in 1837, to over 5½ millions; in 1838, to nearly 5 millions; in 1841, to nearly 5 millions; in 1843, over 4 millions; in 1848, to over 8½ millions, and in 1849, to nearly 10 millions. There was not a single year that was not accompanied by this import, and over the whole twenty-two years the total of importations reached the enormous figure of, approximately, 92 millions sterling. It must be clearly understood that this sum represents, not the gross, but the net importation or balance of imports over exports, and that the money passed into the currency of the country, taking its place as such and displacing gold *pari passu*. Within the limits of very considerable exceptions, the correspondence of silver fluctuations with those of gold is clearly

perceptible. The silver, on whose coinage a profit or premium was offered by the existing French law to individuals, could only be bought or paid for by the export of gold or services and goods. During these years, 1830-50, it was quite apparently by the latter method, namely, by remittance of goods, as on the whole period there is a slight gain of gold—nearly 3 millions—contrary to what bimetallic law would have led to expect. The correspondence, however—a simultaneity—of the two movements, of import of silver and export of gold, is strongly marked in the years 1834-39 and 1841-48, and the failure of correspondence of the totals is to be explained by the statistics of French foreign-trade balances during the years named.

114. From the experience of the Latin Union, what would be the effect of free silver in the United States?

If the United States could raise the market ratio from 32 to 1 to nearly 16 to 1 the result would be an alternating standard, disastrous to commerce and credit and beneficial to none but bullion brokers. If the market ratio cannot be changed we will be forced to a silver basis.

FINANCIAL PLATFORMS.

REPUBLICAN.

We are unalterably opposed to every measure calculated to debase our currency or impair the credit of our country. We are, therefore, opposed to the free coinage of silver, except by international agreement with the leading commercial nations of the world, which we pledge ourselves to promote, and until such agreement can be obtained the existing gold standard must be preserved.

All our silver and paper currency must be maintained at parity with gold, and we favor all measures designed to maintain inviolably the obligations of the United States, and all our money, whether coin or paper, at the present standard, the standard of the most enlightened nations of the earth. *Adopted at St. Louis, June, 18, 1896.*

DEMOCRATIC.

We demand the free and unlimited coinage of both gold and silver at the present legal ratio of 16 to 1, without waiting for the aid or consent of any other nation. We demand that the standard silver dollar shall be full legal tender, equally with gold, for all debts, public or private, and we favor such legislation as will prevent for the future the demonetization of any kind of legal tender money by private contract.

We are opposed to the policy and practice of surrendering to the holders of the obligations of the United States the option reserved by law to the government of redeeming such obligations in either silver coin or gold coin. *Adopted at Chicago, July 9, 1896.*

POPULIST.

First—We demand a national money, safe and sound, issued by the general government only, without the intervention of banks of issue, to be full legal tender for all debts, public and private, a just, equitable and efficient means of distribution direct to the people and through the lawful disbursements of the government.

Second—We demand the free and unrestricted coinage of silver and gold at the present legal ratio of 16 to 1, without waiting for the consent of foreign nations.

Third—We demand the volume of circulating medium be speedily increased to an amount sufficient to meet the demands of the business and population of this country and to restore the just level of prices of labor and production.

Fourth—We denounce the sale of bonds and the increase of the public interest-bearing debt made by the present administration as unnecessary and without authority of law, and that no more bonds be issued except by specific act of Congress.

Fifth—We demand such legislation as will pre-

vent the demonetization of the lawful money of the United States by private contract.

Sixth—We demand that the government, in payment of its obligations, shall use its option as to the kind of lawful money in which they are to be paid, and we denounce the present and preceding administration for surrendering this option to the holders of government obligations.

Seventh—We demand a graduated income tax, to the end that aggregated wealth shall bear its just proportion of taxation, and we regard the recent decision of the Supreme Court relative to the income tax law as a misinterpretation of the Constitution and an invasion of the rightful powers of Congress over the subject of taxation.

Eighth—We demand that postal savings banks be established by the government for the safe deposit of the savings of the people and to facilitate exchange.

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"THE TRUTH ABOUT MONEY."

WHAT AUTHORITIES SAY OF IT.

MANSFIELD, OHIO, August 8, 1896.

Mr. E. J. Onstad, President Finance Pub. Co., Milwaukee, Wis.

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